

South Dakota Science and Technology Authority

**Board Meeting
September 17, 2015**



630 East Summit Street
Lead, SD 57754

Call to Order – Chairperson Casey Peterson

1A. Call Roll

Dr. Ani Aprahamian

Mr. Paul Christen

Mr. Dana Dykhouse

Ms. Pat Lebrun

Mr. Casey Peterson

Mr. Ron Wheeler

Dr. Robert Wilson

Dr. Heather Wilson

1B. Introduce New Board Member Dr. Robert Wilson and Introduce Guests

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**South Dakota Science and Technology Authority
Board Meeting – September 17, 2015**

Agenda Item: 02

Approve Agenda – Chairperson Casey Peterson

Attached is the SDSTA Board agenda for the September 17, 2015 meeting.

Recommended Action:

Motion to approve agenda as presented.

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AGENDA
South Dakota Science and Technology Authority
630 East Summit Street, Lead, South Dakota
Annual Meeting of the Board of Directors
Thursday, September 17, 2015 at 9:00 AM (MT)

SDSTA Mission: *To enable compelling underground research in a safe work environment and foster transformational science education.*

Title	Report	Recommendations
1. Call to Order	-- Chair Casey Peterson	<i>Informational</i>
A. Call Roll		
B. Welcome New Board Director Dr. Robert Wilson and Introduce Guests		
2. Approve Agenda	-- Chair Casey Peterson	<i>Motion to approve agenda</i>
3. Approve Minutes	-- Chair Casey Peterson	<i>Motion to approve June 30, 2015 minutes</i>
4. South Dakota Community Foundation	-- Mr. Ron Wheeler	
5. Audit Committee Report	-- Ms. Pat Lebrun	<i>Motion to accept audit committee report</i>
6. Financial Report	-- Mr. Mike Headley	
A. Financial Statements	-- Ms. Nancy Geary	
B. Interest Letter on State-held Funds		
C. Fixed Asset Listing		
D. FY Per Diems Report		
E. BOA Captive Grant Agreement, Signed	-- Mr. Tim Engel	<i>Informational</i> <i>Motion to accept financial report</i>
7. Report from Executive Director	-- Mr. Mike Headley	
A. SDSTA Report		<i>Motion to accept executive director's report</i>
B. Easement Agreement between Homestake and SDSTA		<i>Motion to approve easement agreement between Homestake and SDSTA, and to authorize the chairperson and executive director, in consultation with legal counsel, to finalize and agree to the terms of the Exhibits thereto</i>
C. Strategic Plan Report		<i>Motion to approve strategic plan as presented</i>
D. Declarations of Surplus for ATV and Refuge Chambers		<i>Informational</i>
E. E&O Curriculum Development	-- Dr. June Apaza	<i>Informational</i>
F. Visitor Center Update	-- Ms. Billi Bierle	
8. Discuss Draft Programmatic Agreement (Long Baseline Neutrino Facility)	-- Mr. Mike Headley	<i>Motion to authorize executive director to sign the draft programmatic agreement</i>
9. PDA-Third Agreement between Homestake and SDSTA, Signed	-- Mr. Tim Engel	<i>Informational</i>

Please do not place or accept cell phone calls during this meeting. A copy of this agenda has been posted in a manner visible to the public at the entrance to the South Dakota Science and Technology Authority office located at 630 East Summit Street, Lead, South Dakota at least 24 hours prior to this meeting. Telephone: (605) 722-8650.

AGENDA
South Dakota Science and Technology Authority
630 East Summit Street, Lead, South Dakota
Annual Meeting of the Board of Directors
Thursday, September 17, 2015 at 9:00 AM (MT)

Title	Report	Recommendations
10. Executive Session	-- Chair Casey Peterson	<i>Motion to enter executive session to discuss personnel matters and to consult with legal counsel concerning contractual matters</i>
11. Report from Executive Session	-- Chair Casey Peterson	<i>Motion to accept executive session report</i>
12. Conflict of Interest Mitigation Plan	-- Mr. Tim Engel	<i>Motion to approve conflict of interest mitigation plan</i>
13. Confirm date and time of next meeting	-- Chair Casey Peterson	<i>Thursday, December 17, 2015 at 9:00am (MT)</i>
14. Board Comments		
15. Adjourn	-- Chair Casey Peterson	<i>Motion to adjourn</i>

SDSTA Board Member Terms of Service, Committees and Schedule

Board Members and Terms of Service			
	Board Members	Appointed	Term Expires
1.	Dr. Ani Aprahamian	December 10, 2009	December 9, 2015
2.	Mr. Paul Christen	January 31, 2011	August 8, 2016
3.	Mr. Dana Dykhouse, Vice-chair	Re-appointed August 1, 2014	August 14, 2020
4.	Ms. Patricia Lebrun, Secretary-Treasurer	Re-appointed August 16, 2010	August 8, 2016
5.	Mr. Casey Peterson, Chair	Re-appointed August 25, 2015	August 8, 2021
6.	Mr. Ron Wheeler, Vice-chair	Re-appointed April 10, 2014	April 9, 2020
7.	Dr. Robert Wilson	August 24, 2015	August 8, 2021
8.	Dr. Heather Wilson, ex-officio member	SDSM&T President appointed July 1, 2014	
	Committees and Members (2015)	2015 Board Schedule	
	Audit Committee Members:	March 20, 2015	9:00 am (MT)
	➤ Paul Christen, Pat Lebrun-Chair	June 30, 2015	8:30 am (MT)
	Nominating Committee Members:	September 17, 2015	9:00 am (MT)
	➤ Ani Aprahamian, Dana Dykhouse	December 17, 2015	9:00 am (MT)

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Approve Minutes – Chairperson Casey Peterson

Attached is the SDSTA Board Minutes from the annual meeting held on June 30, 2015.

Recommended Action:

Motion to approve the Minutes of the June 30, 2015 meeting as presented.

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South Dakota Science and Technology Authority Board of Directors
Meeting Minutes
Tuesday, June 30, 2015
Lead, South Dakota

The Board of Directors of the South Dakota Science and Technology Authority (SDSTA) convened at 8:34 AM Mountain Time (MT) on Tuesday, June 30, 2015 in the 2nd Floor Vault Conference Room at the South Dakota Science and Technology Authority, 630 East Summit Street, Lead, South Dakota.

MEMBERS OF THE BOARD IN ATTENDANCE

Dr. Ani Aprahamian
Mr. Paul Christen
Vice Chairperson Dana Dykhouse
Secretary/Treasurer Patricia Lebrun
Chairperson Casey Peterson
Vice Chairperson Ron Wheeler
Dr. Heather Wilson

MEMBERS OF THE BOARD NOT IN ATTENDANCE

Mr. Thomas Adam

SDSTA STAFF

Mr. Tim Engel, Legal Counsel
Ms. Nancy Geary, Chief Financial Officer
Mr. Mike Headley, Executive Director
Ms. Sharon Hemmingson, Business Services & Contracts Manager
Ms. Mandy Knight, User Support Office Manager
Ms. Leatta Mathis, Contracts Specialist
Mr. KC Russell, Cultural Diversity Coordinator
Mr. Noel Schroeder, Environment, Health and Safety (EHS) Director

ALSO PRESENT DURING ALL OR PART OF THE MEETING

Ms. June Apaza, Education and Outreach Director (BHSU)
Ms. Muffy Christen, Board Member's spouse
Ms. Elizabeth Freer, Oppenheim Lewis
Mr. Michael Ledford, Lewis-Burke Associates
Ms. Patti McNamara, Board Member's guest
Mr. Denny Sanford, philanthropist
Mr. Joshua Willhite, Long Baseline Neutrino Facility Far Site Conventional Facilities (LBNF FSCF) Project Manager

ITEM 1. – CALL TO ORDER

Chairperson Peterson called the meeting to order at 8:34 AM (MT). Roll call was held. All members were present except Mr. Adam and Dr. Wilson, who joined the meeting at 8:38 AM.

Chairperson Peterson asked audience members to introduce themselves. Chairperson Peterson welcomed Mr. Michael Ledford of the SDSTA's advocacy firm Lewis-Burke Associates and lauded their efforts in obtaining federal funding for the project.

ITEM 2. – APPROVE AGENDA

Chairperson Peterson asked for a motion to approve the agenda.

Motion by Mr. Wheeler and second by Mr. Christen to approve the agenda as presented. Motion passed unanimously.

ITEM 3. – APPROVE MINUTES

Chairperson Peterson asked for comments, changes, or corrections to the Minutes of the March 20 and May 11, 2015 meetings. Hearing none, a motion to approve was requested.

Motion by Mr. Dykhous and second by Ms. Lebrun to approve the Minutes of the March 20 and May 11, 2015 meetings as presented. Motion passed unanimously.

ITEM 4. – AUDIT COMMITTEE

Ms. Patricia Lebrun reported that she and Mr. Paul Christen had participated in the audit close-out teleconference with SDSTA Chief Financial Officer (CFO) Ms. Nancy Geary. She and Mr. Christen also reviewed the Audit Committee Charter and concurred no revisions were necessary.

Motion by Ms. Lebrun and second by Mr. Christen to accept the audit report as presented. Motion passed unanimously.

Ms. Lebrun and Mr. Christen accepted Chairperson Peterson's appointment to continue to serve on the Audit Committee. Chairperson Peterson voiced his appreciation of their service on this important committee.

ITEM 5. – FINANCIAL REPORT

SDSTA Executive Director Mr. Mike Headley and CFO Ms. Geary provided an overview of the Fiscal Year (FY) 2016 budget including any increases or decreases from the FY 2015 Operating and CAPEX budgets, carry-over CAPEX project amounts, and the overall sources of funding for the new fiscal year.

Ms. Geary noted the \$10 million for the Ross Shaft rehabilitation and the \$3.5 million slated for LUX-ZEPLIN (LZ) surface facility upgrades and xenon gas purchase were not funded at this point. Mr. Headley advised that up to \$10 million is expected from the Department of Energy (DOE) through Fermilab upon Congressional appropriation.

Motion by Mr. Wheeler and second by Mr. Dykhous to approve the FY 2016 administration, CAPEX and federal budget, with expenditure authority for the \$3.5 million LZ surface facility upgrades and xenon gas purchase subject to securing funding. Motion passed unanimously.

Ms. Geary reported the May financials are in good shape. She said revenue looks especially good, thanks to the \$3.95 million South Dakota Legislative appropriation and nearly \$2 million from Future funds. Mr. Headley advised that all the raw steel material to complete rehabilitation of the Ross Shaft has been purchased. The budget for the Visitor Center increased approximately \$150,000 over the \$5 million authorized by the board.

Mr. Joshua Willhite, Visitor Center Project Manager, provided an overview of the newly approved FY 2016 CAPEX "Davis Ring Tribute" line item. Sturgis sculptor and South Dakota artist laureate Mr. Dale Lamphere is designing the Davis Tribute, utilizing pieces of the original water tank from Ray Davis's Nobel Prize-winning neutrino experiment. A celebration commemorating the 50th anniversary of Davis's work on the 4850L of the Homestake Mine is planned for later this fall when the tribute has been installed at the Visitor Center.

Vice Chairperson Wheeler thanked Mr. T. Denny Sanford for his flexibility in allowing the Board to re-direct Gift #3 funds, and for his encouragement and advice to leverage that amount by raising an additional \$3.5 million from other private funds.

Motion by Mr. Christen and second by Mr. Dykhouse to accept the financial report. Motion passed unanimously.

ITEM 6. – REPORT FROM THE EXECUTIVE DIRECTOR

Mr. Headley proclaimed excitement that the SDSTA's safety performance continues to improve, as evidenced by completing the first six months of 2015 without a recordable injury, for a total of nine months since Sanford Laboratory's last recordable injury. Mr. Headley emphasized the federal partners are very pleased by Sanford Laboratory's progress. Members of the recent Environment, Health, and Safety Oversight Committee (EHSOC) review were impressed with the safety culture developing at Sanford Laboratory, which stands as a testament to EHS Director Noel A. Schroeder, the EHS team, and the entire staff.

Mr. Dykhouse congratulated the entire staff on this milestone achievement, noting everyone must be involved to accomplish a safety culture as Sanford Laboratory is now experiencing.

Mr. Headley reported trips underground have risen to 50 – 60 daily, including researchers and contractors. He noted this number rises significantly with tours like those scheduled for the board and selected guests later in the day.

Mr. Headley recognized Mr. Willhite and Project Controls Analyst Ms. Pamela Hamilton, who stepped in as Exhibit Project Manager, for their efforts on the Sanford Lab Homestake Visitor Center project.

On the science front, Mr. Headley reported the MAJORANA DEMONSTRATOR (MJD) was transitioning to a physics data collection mode. LUX has completed well over one-third of the 300-day data collection run currently underway.

The completion date for the Compact Accelerator System for Performing Astrophysical Research (CASPAR) and the Black Hills State University Underground Campus (BHUC) projects were set back four days due to curtailed operations necessitated by receiving 18 inches of rain over a two-week period.

Mr. Headley continued that the SDSTA team did a great job meeting the challenges presented by receiving this much moisture. He explained that areas where water might pond in upper levels of the underground are monitored to ensure safe working conditions for staff, researchers, and contractors working below. Operations were curtailed at the 4850L for the first time in two years. In response to a question from Chairperson Peterson, Mr. Headley advised inflow in the upper levels above the 3650L increased from an average of 250-300 GPM to 1000 GPM during the rain event. He advised a project slated to be funded by the Long Baseline Neutrino Facility (LBNF) would install piping across the 2000L from the Ross Shaft to No. 5 Shaft, which would increase the ability to handle large inflows.

The LBNF/Deep Underground Neutrino Experiment (LBNF/DUNE) work is moving forward. The LBNF project team is refreshing the Conceptual Design Review in preparation of the Critical Decision One (CD-1) Review with the DOE to be held July 14-16 at Fermilab.

The Ross Shaft refurbishment is 55 percent complete. The project remains on schedule for completion by May 2017.

Mr. Headley noted Communications Director Connie Walter and her team of volunteers have plans well underway for this year's event-packed Neutrino Day festivities on July 11.

Mr. Headley announced nine scholars were selected for this year's Davis-Bahcall program. The scholars' five-week experience began by working with researchers at Sanford Laboratory and continued with visits to 3M's Aberdeen plant, Minnesota's Soudan Underground Laboratory, the University of Wisconsin, and the Argonne National Laboratory, and Fermi National Accelerator Laboratory in Illinois. Later in the week, the scholars will travel to Gran Sasso National Laboratory in Italy. 3M funds

50 percent of the program. It was discussed that Sanford Lab needs to stay in closer contact with 3M regarding the program to encourage them to keep funding the program.

Mr. Headley introduced new Education and Outreach (E&O) Director June Apaza. He explained that Dr. Ben Sayler is still actively involved with the E&O program, while Ms. Apaza leads the E&O team efforts on a daily basis. Ms. Apaza advised that six teachers are assisting with the development of curriculum modules this summer. Two units for grades 3-5, grades 6-8, and grades 9-11 showcasing the science being conducted at the Sanford Lab will be completed later this year. The six curriculum units will be made available to schools statewide in a manner similar to how the Center for Advancement of Mathematics and Science Education (CAMSE) shares its curriculum. Mr. Headley noted distribution will ultimately extend beyond state borders. He continued that plans are underway to expand undergraduate efforts through interaction between the Sanford Lab, BHSU, and South Dakota School of Mines and Technology (SDSM&T).

Ms. Lebrun suggested generating a report which follows the Davis-Baheall scholars as they pursue their education and career paths would be an excellent assessment tool and resource to gain monetary support for the program. Ms. Apaza advised that data following scholars for 4-5 years beyond their participation has been collected since the beginning of the program. Mr. Headley said the reports would be shared with the board.

*Motion by Mr. Wheeler and second by Ms. Aprahamian to accept the Executive Director's report.
Motion passed unanimously.*

Ms. Lebrun advised that the South Dakota Research, Excellence: A Critical Hallmark (REACH) Committee governs research programs sponsored in South Dakota and coordinates the Experimental Program to Stimulate Competitive Research (EPSCoR) projects in South Dakota. She and fellow Committee members Dr. Heather Wilson and Mr. Headley attended the mid-June REACH Committee meeting held in Sioux Falls. Ms. Lebrun commented it is amazing how South Dakota research projects have matured to create jobs, generate knowledge, and achieve goals set over the past decade.

Chairperson Peterson thanked Ms. Lebrun, Dr. Wilson, and Mr. Headley for their involvement on the REACH Committee.

Mr. Headley noted Mr. Willhite would transport the board to the Visitor Center immediately following the meeting for a brief tour of the facility. The building dedication ceremony will begin at 11 AM.

ITEM 7. – CAPTIVE INSURANCE UPDATE

SDSTA Legal Counsel Mr. Tim Engel explained he is part of the group working to have the captives in place and providing coverage by September 1. The SDSTA's existing policies have been extended to September 1 with pro-rated premiums based on last year's rates. Overall, the captive insurance program is progressing quite well.

Mr. Engel reminded the board the Property Donation Agreement (PDA) requires SDSTA to create and to maintain \$75 million in general liability coverage. For the captive, the first \$1 million of coverage will be capitalized by repurposing \$2.5 million of the Indemnification Fund, with the next \$4 million provided through reinsurance purchased by the captive. The South Dakota Office of Risk Management (ORM) will assist with the purchase and administration of the umbrella policies comprising the final \$70 million. In addition to the general liability coverages, the captive will also provide directors and officers, employment practices, and errors and omissions liability coverages. The coverage provided by the captive will be on an occurrence basis. Cost to the SDSTA is anticipated to be comparable to existing premiums, with exception of a one-time \$24,000 charge to purchase nose coverage for the gap period between existing claims-made liability coverage and the captive's occurrence-based claim coverage. Ultimately the SDSTA will have better coverage and better control over cost and the claims process.

ITEM 8. – THIRD AMENDMENT TO PROPERTY DONATION AGREEMENT

Mr. Engel reported Homestake/Barrick has graciously agreed to repurposing \$2.5 million of a \$10 million indemnity fund required by the PDA to capitalize the captive in a Third Amendment to the PDA. Its companion document is the Notice of Amendment to Deed, which merely incorporates the changes from the three PDA amendments into the original 170-page Deed for the public record.

Mr. Engel explained the Legislative action which appropriated the \$10 million limited its use to the Indemnification Fund. It was therefore necessary to amend the appropriation legislation to allow repurposing the funds. The Governor has approved this amendment.

Mr. Engel asked for a motion approving both amendments as presented and authorizing the Executive Director or the Chairman to execute the documents. He noted the amendments are designed to be self-executing once the Division of Insurance issues the Certificate of Authority in September.

Motion by Mr. Wheeler and second by Mr. Christen to approve the amendment as presented and to authorize the Executive Director or Chairman to execute on behalf of SDSTA. Motion passed unanimously.

ITEM 9. – ANNUAL REVIEW OF POLICIES AND PROCEDURES

Mr. Headley discussed the updated, revised and retired policy recommendations; all had been reviewed by Mr. Engel.

The following policies were recommended for approval:

- Manual Contents Page (*updated*)
- Policy 1:1 Authorization (*updated “SDSTA” only*)
- Policy 1:2 Policies and Procedures (*updated “SDSTA” only*)
- Policy 3:8 Salary and Hourly Payroll Policy (*incorporated policy 4:2:1 Business Hours*)
- Policy 4:1 Personnel Benefits Policy (*added “Policy” to title and updated*)
- Policy 4:2 Outside Employment and Political Activity Policy (*retitled and updated*)
- Policy 4:3 Holidays Policy (*added “Policy to title and updated “SDSTA” only*)
- Policy 4:4 Leave Policy (*added “Policy to title and updated “SDSTA” only*)
- Policy 4:4:4 Years of Service and Longevity Pay Policy (*retitled and incorporated policy 4:4:3*)
- Policy 4:4:5 Military Policy (*added “Policy” to title and reworded for clarity*)
- Policy 4:5 Employment Policy (*retitled and incorporated policy 4:5:1. Created new Employment Procedure 4:5A*)
- Policy 4:6 Resignation Policy (*retitled and updated*)
- Policy 4:8 Workers Compensation Policy (*added “Policy” to title, reformatted and reworded for clarity*)
- Policy 4:12 Progressive Discipline and Termination Policy (*reformatted and reworded for clarity*)
- Policy 4:13 Inclement Weather Policy (*added “Policy” to title, updated “SDSTA,” reformatted, and reworded for clarity*)
- Policy 4:14 Temporary Job Transfer (*removed “Procedure” from title and added “Policy,” and reworded for clarity*)

The following policies were recommended for retirement:

- Policy 4:2:1 Business Hours
- Policy 4:4:1 Accumulated Vacation and Sick Leave (*Section A moved to Policy 4:10*)
- Policy 4:4:2 Vacation Leave while Traveling for Business (*incorporated with Policy 4:4*)
- Policy 4:4:3 Years of Service (*incorporated with Policy 4:4:4*)
- Policy 4:5:1 At-Will Employees (*incorporated with Policy 4:5*)
- Policy 4:7 Training (*incorporated with Policy 4:1*)

- Policy 4:9 Personal References (*incorporated with Policy 4:6*)
- Policy 4:10 Hiring Process (*incorporated into new Procedure 4:5A*)
- Policy 4:11 Moving Allowance (*incorporated into new Procedure 4:5A*)

The following procedure was presented for informational purposes only.

- Procedure 4:5A Employment Procedures (new)

Mr. Headley asked if there were any questions or comments. There were none.

Motion by Mr. Dykhous and second by Ms. Lebrun to approve the new, updated, and retired policies as presented. Motion passed unanimously.

Chairperson Peterson asked if there were any questions in regard to the Conflict of Interest Statement each board member is required to sign annually. There were none. The forms were signed and handed to User Support Office Manager Mandy Knight at the meeting.

ITEM 10. – EXECUTIVE SESSION

Motion by Mr. Wheeler and second by Ms. Lebrun to enter into executive session to discuss personnel matters and to consult with legal counsel concerning contractual matters. By roll call vote, the motion passed unanimously.

The board recessed at 9:29 AM for Executive Session and reconvened at 10:03 AM.

ITEM 11. – REPORT FROM EXECUTIVE SESSION

Chairperson Peterson reported that the board consulted with legal counsel concerning legal and contractual matters. No action was taken.

Motion by Dr. Aprahamian and second by Mr. Christen to approve the executive session report. Motion passed unanimously.

ITEM 12. – REPORT FROM NOMINATING COMMITTEE

Mr. Dykhous reported he and Dr. Ani Aprahamian, comprising the Nominating Committee, propose the following slate of officers for the fiscal year beginning July 1, 2015.

Chairperson: Mr. Casey Peterson
 Vice-Chairperson: Mr. Dana Dykhous
 Vice-Chairperson: Mr. Ron Wheeler
 Secretary Treasurer: Ms. Patricia Lebrun

ITEM 13. – ELECT OFFICERS

Chairperson Peterson asked if there were nominations from the floor. There were none and following the prescribed election procedure, a motion was made.

Motion by Mr. Christen and second by Mr. Wheeler to accept the report from the nominating committee and to elect the slate of officers as presented. Motion passed unanimously.

ITEM 14. – CONFIRM DATE AND TIME OF NEXT MEETING

Chairperson Peterson asked if anyone had concerns with the next board meeting scheduled for Thursday, September 17, 2015 at 9:00 A.M. (MT). There were none.

ITEM 15. – BOARD COMMENTS

Ms. Lebrun commented on the impressive progress made each time the group meets. She complimented Mr. Sanford, Barrick/Homestake, and all the interested parties for the flexibility exhibited in making the changes needed to move the Sanford Laboratory forward.

Mr. Dykhouse thanked Chairperson Peterson for serving another year as chair and for his efforts to ensure the board runs professionally and effectively.

Mr. Christen reiterated the sentiments expressed by Ms. Lebrun and Mr. Dykhouse. He voiced his support of Mr. Headley's dual role with SDSTA and Fermilab, and commented the SDSTA's future has never looked brighter.

Mr. Wheeler thanked Mr. Sanford for his flexibility in allowing adjustments to gift agreements, expressed his appreciation to Ms. McNamara for attending today, and complimented Mr. Headley for his leadership in building an excellent organization.

Mr. Headley agreed that the SDSTA's future looks amazing and recognized that its bright future is the direct result of the foundation built by this board, people like Mr. Sanford and Ms. McNamara, and the entire SDSTA team. He stated his appreciation to be a part of this amazing team and thanked everyone for their support.

Dr. Wilson expressed her excitement that physics and research were truly coming to the forefront in South Dakota. She noted first the board's support in co-sponsoring the recent Research Conference. Over 100 researchers from around the world attended and five South Dakota universities presented on panels featuring the world's best researchers. Secondly, she reported her gratitude for the dialogue between SDSM&T researchers and Fermilab representatives in South Dakota for the National Environment Policy Act (NEPA) review. There are exciting opportunities for chemical, civil, and electrical engineering research during construction of the LBNF facility, ranging from rock mechanics to pumping liquid argon a mile underground. Lastly, she proudly reported that SDSM&T has 21 doctoral Physics students and over 50 undergraduate students registered for the fall semester.

Dr. Aprahamian said she is honored to work with this board. She noted it has been an impressive six years and the future looks fabulous.

Mr. Engel agreed that the group has indeed come a long way in nine years, which is really a very short time to have progressed so far.

Chairperson Peterson reported that Mr. Tom Adam was unable to attend the meeting, but would be presented a certificate for his dedicated service on the board. He reminded members to extend their personal thanks to Mr. Adam.

Mr. Sanford expressed deep appreciation to the board for the time, effort, and dedication in keeping the project alive, working around obstacles, and continuing to move forward.

Mr. Peterson thanked Mr. Sanford for his comments and for his part in taking the Sanford Laboratory from a survival phase to a growth phase. He too noted the project has been blessed with support from Mr. Sanford, the State of South Dakota, and the entire SDSTA team.

ITEM 16. – ADJOURN

Chairperson Peterson asked if anyone had any other questions or comments, then called for a motion to adjourn.

Motion by Mr. Dykhouse and second by Mr. Christen to adjourn. Motion passed unanimously.

Meeting adjourned at 10:15 AM.

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South Dakota Community Foundation – Mr. Ron Wheeler

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Audit Committee Chairperson Ms. Pat Lebrun

Audit Committee Members:

Ms. Pat Lebrun, Audit Committee Chair
Mr. Paul Christen

Recommended Action:

Motion to accept Audit Committee report.

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

AUDIT COMMITTEE CHARTER

STATEMENT OF MISSION

The mission of the South Dakota Science and Technology Authority (SDSTA) Audit Committee is to be the pro-active steward for oversight of the financial reporting and disclosure process for SDSTA, including the investigation of claimed breaches of ethics, theft, fraud, embezzlement and reports of whistle-blowers. Our responsibility is to the SDSTA Board of Directors to report independently on the results of the oversight so as to assist in maintaining and enhancing the quality of the financial reporting. The Audit Committee is committed to communication between and among directors, the external auditor and Chief Financial Officer (CFO).

A. The Audit Committee has the following responsibilities and duties:

1. Appointment

- Annually be appointed by the SDSTA Board of Directors at their annual meeting in June.
- At least one member will be deemed a “financial expert,” as defined by applicable law and regulation.

2. Review

- Annually review and update this Charter.
- Annually determine the independence of Audit Committee members through a certification by the SDSTA Board of Director’s Chairperson.
- Review the SDSTA’s annual financial statements and any reports or other financial information submitted to or from any governmental body, or the public, including any certification, report, opinion or review rendered by the external auditor or the SDSTA CFO.
- Review any report or memo or other communication from Federal and State regulators and reviewers, and attend as many entrance and exit conferences as possible.

3. External Auditors/CFO/Independent Counsel/Other Advisors

- The Audit Committee shall have the independent authority to engage any legal counsel or other advisors it deems necessary to carry out its duties.
- Periodically consult with the external auditor out of the presence of management about internal controls and the fullness and accuracy of the company’s financial statements.
- Make the selection, retention, and review the performance of, the external auditor, considering independence and effectiveness and approve the fees paid to the external auditor as well as the proposed fee. On an annual basis, the Audit Committee should review and discuss with the external auditor all significant relationships the external auditor has with the company to determine the auditor’s independence and consider the appropriateness of the non-audit services prior to their engagement.
- Periodically meet with the CFO on the results of exams, and be available to CFO for appropriate communications at any time they desire the meeting.

4. Financial Reporting Process

- In consultation with the external auditor, review the integrity of the SDSTA’s financial reporting processes.

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

AUDIT COMMITTEE CHARTER

- Consider the external auditor's judgments about the quality and appropriateness of the SDSTA's accounting principles, as applied in its financial reports and as promulgated by the Governmental Accounting Standards Board.
- Consider and forward to the SDSTA Board of Directors, if appropriate, recommendations for major changes to the SDSTA's auditing and accounting principles and practices as suggested by the external auditor, management or the CFO.
- Establish regular and separate systems of reporting to the Audit Committee by management and the external auditor regarding any significant judgments made in management's preparation of the financial statements and the Audit Committee's view of each as to appropriateness of such judgments.
- Following completion of the annual audit, review separately with management and the external auditor any significant difficulties encountered during the course of the audit, including any restrictions on the scope of work, or access to required information.
- Review and resolve any significant disagreement among management and the external auditor in connection with the preparation of the financial statements. Review in detail the passed audit adjustments and the materiality levels used by the external auditor, and the impact of Management's estimates used in the financial statement preparation.
- Review with the external auditor and management the extent to which changes or improvements in financial or accounting practices, as approved by the Audit Committee in prior reports or meetings, have been implemented.

5. Ethical and Legal Compliance

- Establish, review and update periodically a Conflict of Interest Policy and ensure that management has established a system to enforce this Policy.
- Review management's monitoring of compliance with the SDSTA's Conflict of Interest Policy, and verify that management has the proper review system in place to ensure that financial statements, reports, and other financial information disseminated to governmental organizations, and the public, satisfy legal requirements.
- Review with SDSTA's retained legal counsel any legal matter that could have a significant impact on the SDSTA's financial statements.
- Periodically review individual committee member education and obtain resources, seminars and materials to keep the level of member's education current.
- Perform any other activities consistent with this Charter, the SDSTA's By-Laws and governing law, as the Audit Committee or the SDSTA Board of Directors deems necessary or appropriate.

6. Reporting

In order to facilitate the proper execution of its duties and responsibilities, the Audit Committee shall conduct its reviews and investigations in a confidential manner. The Audit Committee shall report to the SDSTA Board the results of the Financial Reporting Process, consultations with External Auditors, the CFO or other Advisors, or any other issues they deem important for the SDSTA Board to meet its responsibilities. These reports shall include, but not be limited to, the results of the annual external audit or any internal audit on financial reports or compliance (including difficulties or disagreements encountered, if any, past

SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

AUDIT COMMITTEE CHARTER

adjustments, materiality defined by the auditor, any legal matter having a material impact on the report, management letter comments, etc.), the integrity of the financial reporting system, the appropriateness of the accounting principles applied to the financial reports, the status of internal controls, any suggested change to any of the above systems the Audit Committee thinks should be made, any significant report or communication from any other matter that the Audit Committee deems critical information needed by the SDSTA Board. To the extent permitted by applicable law, the Audit Committee's reports to the Board of Directors shall be delivered in closed session.

The Audit Committee shall strive to provide the Board with the information it needs to manage the reporting and accounting for the SDSTA as well as utilize the reports to manage all of the other risks it faces. These reports will be made when information is received and available. The Annual Schedule below outlines some of the reporting dates anticipated.

7. Budget Process

The Audit Committee will meet with the CFO in March to establish the annual budget for the Audit Committee to cover costs for audit fees, legal fees, consulting fees, continuing education travel and costs and miscellaneous costs.

B. Annual Schedule

The Audit Committee will meet at its discretion but the following is a guideline for business to be conducted during the year:

December-January – Meet with external auditors to discuss preliminary audit findings, letters to management, passed adjustments, materiality, management estimates, and quality and appropriateness of accounting principles.

March-June – Present audit findings, letter of comments and other appropriate information to the SDSTA's Board of Directors at SDSTA annual meeting. Meet to update issues on hiring other outside auditors for review, as deemed necessary, of such areas as EDP, compliance, etc.

September – Request proposal for external audit. Meet with CFO.

October/November/December – Meet with CFO to review any issues regarding the audit. Meet to engage external financial auditor on entrance conference. Review all SDSTA regulators' reports (State and/or Federal). Certify as to committee member's independence.

C. Limitations on the Committee's Role:

While the Audit Committee has the responsibilities and powers as stated above, it is not the Committee's duty to audit the SDSTA's financial statements or to determine that the SDSTA's financial statements are complete and accurate in accordance with generally accepted accounting principles (GAAP), as promulgated by the Governmental Accounting Standards Board. These are the responsibilities of management and the independent auditors.

Financial Report – Mr. Mike Headley

Financial Report

- 6A. Financial Statements - Attached is the SDSTA Financial Summary as of August 31, 2015. (This is a duplicate of the summary found under Agenda Item #7 SDSTA August Monthly Report in the e-Board Packet.)
- 6B. Interest Letter on State-held Funds.
- 6C. Fixed Asset Listing.
- 6D. Fiscal Year 2014-2015 Per Diems Report.
- 6E. State of South Dakota, Bureau of Administration (BOA) Captive Grant Agreement, signed.

Recommended Action:

Motion to accept the Financial Report as presented.

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DIVISION: ALL

BALANCE SHEET

ASSETS

AS OF
08/31/15

CURRENT ASSETS

First Interstate Checking	\$	1,668,735.76
First Interstate Other		29,081.27

Total in Local Checking		1,697,817.03
SD Treas: Indemnification		7,617,868.59
SD Treas: Insurance		0.01
SD Treas: Mine Closure		1,378,755.95
SD Treas: Operating		41,204.29
SD Treas: Sanford		1,212,764.30
SD Treas: Sanford Gift #2		3,106,530.44
SD Treas: SB196 Transfer		1,742,615.57

Total with SD Treasurer		15,099,739.15
Billed A/R		2,175,425.43
Unbilled A/R		41,656.30
Other A/R		304,134.14
Inventory - Supplies		2,616,992.22
Inventory - Warehouse		369,104.49
Other Current Assets		248,515.62

Total Current Assets		22,553,384.38

FIXED ASSETS

Land, Underground & Other	12,398,635.03
Bldgs & Infrastructure	8,881,327.62
Improvements	64,569,774.83
Computer Equipment	451,472.54
Equipment & Fixtures	10,052,148.82
Accum Depr & Amort	(9,510,831.14)

Total Fixed Assets	86,842,527.70

OTHER ASSETS

Work in Process	2,277,954.56
Equipment - Capital Lease	492,449.69
Pension Deferred Outflows	7,176,478.00
Captive Indemnification	2,500,000.00

Total Other Assets	12,446,882.25

TOTAL ASSETS

=====

\$ 121,842,794.33

=====

DIVISION: ALL

BALANCE SHEET

LIABILITIES & EQUITY

AS OF
08/31/15

CURRENT LIABILITIES

Accounts Payable	\$	2,284,582.81
Other Payables		91,427.32

Total Accounts Payable		2,376,010.13
Accrued Payroll Liab		1,050,452.54

Total Current Liabilities		3,426,462.67

OTHER LIABILITIES

LT Accrued EB/Lease		492,449.69
Pension Deferred Inflows		4,412,373.00

Total Other Liabilities		4,904,822.69

STOCKHOLDER'S EQUITY

Restricted: Indemnificati		7,500,000.00
Restricted: Captive		2,500,000.00
Restricted: Sanford I.Lab		2,897,391.48
Restricted: Mine Closure		1,378,755.95
Restricted: Sanford Gift2		2,979,083.00
Restricted: Pension		2,045,761.00

Total Restricted Funds		19,300,991.43
Investment in Gen FA		86,923,527.70
Unrestricted Funds		7,286,989.84

Total Equity		113,511,508.97

TOTAL LIABILITIES & EQUITY

=====

\$ 121,842,794.33

=====

ALL

STATEMENT OF INCOME

FOR THE PERIOD ENDING 08/31/15

	YR-TO-DATE
REVENUE	
DOE Subcontracts	\$ 3,268,622.73
State Revenue	14,751.57
Contributions & Donations	125,000.00
Checking Interest	19.25
Interest Income	20,454.50

TOTAL REVENUE	3,428,848.05
DIRECT COSTS	
Direct Labor	1,191,403.35
ERT Labor	4,517.64
Board of Directors	639.89
Contractual Svcs	1,163,953.85
Inventory	57,288.62
Supplies	120,011.65
Travel - Domestic	20,593.89
Travel - Foreign	26,585.95
Utilities	365,506.86
Other Direct Costs	42,738.15
Unallow/Unbill Costs	68,578.28

TOTAL DIRECT COSTS	3,061,818.13
INDIRECT COSTS	
Fringe Benefits	483,003.09
Overhead	527,028.48

TOTAL INDIRECT COSTS	1,010,031.57

GROSS PROFIT FROM OPERATIONS	(643,001.65)

OTHER INCOME	
Water Treatment	72,789.06
Miscellaneous Income	23,203.80
Other Operating Income	563.90

TOTAL OTHER INCOME	96,556.76
OTHER EXPENSES	
Loss(Gain) on Sale of FA	1,904.54
Reclass Incr Net Assets	(207,546.78)

TOTAL OTHER EXPENSES	(205,642.24)
	=====
NET INCOME/LOSS ()	(340,802.65)
	=====

DIVISION: ALL

COMPARATIVE BALANCE SHEET

ASSETS

	AS OF 08/31/15	AS OF 08/31/14	\$ CHANGE	% CHANGE
<hr/>				
CURRENT ASSETS				
First Interstate Checking	\$ 1,668,735.76	\$ 648,692.05	\$ 1,020,043.71	157.25%
First Interstate Other	29,081.27	531,529.71	(502,448.44)	-94.53%
	-----	-----	-----	-----
Total in Local Checking	1,697,817.03	1,180,221.76	517,595.27	43.86%
SD Treas: Indemnification	7,617,868.59	10,134,549.12	(2,516,680.53)	-24.83%
SD Treas: Insurance	0.01	3.71	(3.70)	-99.73%
SD Treas: Mine Closure	1,378,755.95	1,367,000.31	11,755.64	0.86%
SD Treas: Operating	41,204.29	5,535.53	35,668.76	644.36%
SD Treas: Sanford	1,212,764.30	2,896,023.19	(1,683,258.89)	-58.12%
SD Treas: Sanford Gift #2	3,106,530.44	13,387,210.27	(10,280,679.83)	-76.79%
SD Treas: SB196 Transfer	1,742,615.57	3.11	1,742,612.46	56032554.98%
	-----	-----	-----	-----
Total with SD Treasurer	15,099,739.15	27,790,325.24	(12,690,586.09)	-45.67%
Billed A/R	2,175,425.43	1,337,586.53	837,838.90	62.64%
Unbilled A/R	41,656.30	25,418.65	16,237.65	63.88%
Other A/R	304,134.14	137,354.16	166,779.98	121.42%
Inventory - Supplies	2,616,992.22	2,575,749.36	41,242.86	1.60%
Inventory - Warehouse	369,104.49	370,026.47	(921.98)	-0.25%
Other Current Assets	248,515.62	458,994.17	(210,478.55)	-45.86%
	-----	-----	-----	-----
Total Current Assets	22,553,384.38	33,875,676.34	(11,322,291.96)	-33.42%
 FIXED ASSETS				
Land, Underground & Other	12,398,635.03	12,353,375.03	45,260.00	0.37%
Bldgs & Infrastructure	8,881,327.62	8,881,327.62	-	0.00%
Improvements	64,569,774.83	49,299,966.62	15,269,808.21	30.97%
Computer Equipment	451,472.54	362,464.95	89,007.59	24.56%
Equipment & Fixtures	10,052,148.82	9,234,741.03	817,407.79	8.85%
Accum Depr & Amort	(9,510,831.14)	(7,580,677.46)	(1,930,153.68)	25.46%
	-----	-----	-----	-----
Total Fixed Assets	86,842,527.70	72,551,197.79	14,291,329.91	19.70%
 OTHER ASSETS				
Work in Process	2,277,954.56	1,237,859.50	1,040,095.06	84.02%
Equipment - Capital Lease	492,449.69	607,583.98	(115,134.29)	-18.95%
Pension Deferred Outflows	7,176,478.00	-	7,176,478.00	100.00%
Captive Indemnification	2,500,000.00	-	2,500,000.00	100.00%
	-----	-----	-----	-----
Total Other Assets	12,446,882.25	1,845,443.48	10,601,438.77	574.47%
 TOTAL ASSETS				
	=====	=====	=====	=====
	\$ 121,842,794.33	\$ 108,272,317.61	\$ 13,570,476.72	12.53%
	=====	=====	=====	=====

DIVISION: ALL

COMPARATIVE BALANCE SHEET

LIABILITIES & EQUITY

	AS OF 08/31/15	AS OF 08/31/14	\$ CHANGE	% CHANGE
CURRENT LIABILITIES				
Accounts Payable	\$ 2,284,582.81	\$ 1,246,748.68	\$ 1,037,834.13	83.24%
Other Payables	91,427.32	16,247.58	75,179.74	462.71%
	-----	-----	-----	-----
Total Accounts Payable	2,376,010.13	1,262,996.26	1,113,013.87	88.12%
Accrued Payroll Liab	1,050,452.54	940,812.27	109,640.27	11.65%
	-----	-----	-----	-----
Total Current Liabilities	3,426,462.67	2,203,808.53	1,222,654.14	55.48%
OTHER LIABILITIES				
LT Accrued EB/Lease	492,449.69	607,583.98	(115,134.29)	-18.95%
Pension Deferred Inflows	4,412,373.00	-	4,412,373.00	100.00%
	-----	-----	-----	-----
Total Other Liabilities	4,904,822.69	607,583.98	4,297,238.71	707.27%
	-----	-----	-----	-----
TOTAL LIABILITIES	8,331,285.36	2,811,392.51	5,519,892.85	196.34%
STOCKHOLDER'S EQUITY				
Restricted: Indemnificati	7,500,000.00	10,000,000.00	(2,500,000.00)	-25.00%
Restricted: Captive	2,500,000.00	-	2,500,000.00	100.00%
Restricted: Sanford I.Lab	2,897,391.48	9,262,521.00	(6,365,129.52)	-68.72%
Restricted: Mine Closure	1,378,755.95	1,367,000.31	11,755.64	0.86%
Restricted: Sanford Gift2	2,979,083.00	5,651,945.00	(2,672,862.00)	-47.29%
Restricted: Pension	2,045,761.00	-	2,045,761.00	100.00%
	-----	-----	-----	-----
Total Restricted Funds	19,300,991.43	26,281,466.31	(6,980,474.88)	-26.56%
Investment in Gen FA	86,923,527.70	72,551,197.79	14,372,329.91	19.81%
Unrestricted Funds	7,286,989.84	6,628,261.00	658,728.84	9.94%
	-----	-----	-----	-----
TOTAL EQUITY	113,511,508.97	105,460,925.10	8,050,583.87	7.63%
	=====	=====	=====	=====
TOTAL LIABILITIES & EQUITY	\$ 121,842,794.33	\$ 108,272,317.61	\$ 13,570,476.72	12.53%
	=====	=====	=====	=====

COMPARATIVE STATEMENT OF INCOME

FOR THE PERIOD ENDING 08/31/15

	YEAR TO DATE	PRIOR YEAR TO DATE	\$ CHANGE	% CHANGE
REVENUE				
DOE Subcontracts	\$ 3,268,622.73	\$ 2,351,972.39	\$ 916,650.34	38.97%
State Revenue	14,751.57	411.49	14,340.08	3484.92%
Contributions & Donations	125,000.00	500,000.00	(375,000.00)	-75.00%
Checking Interest	19.25	11.36	7.89	69.45%
Interest Income	20,454.50	34,658.99	(14,204.49)	-40.98%
TOTAL REVENUE	3,428,848.05	2,887,054.23	541,793.82	18.77%
DIRECT COSTS				
Direct Labor	1,191,403.35	1,218,376.07	(26,972.72)	-2.21%
ERT Labor	4,517.64	4,765.50	(247.86)	-5.20%
Board of Directors	639.89	34.52	605.37	1753.68%
Contractual Svcs	1,163,953.85	350,179.27	813,774.58	232.39%
Emergency Resp	-	189.64	(189.64)	-100.00%
Inventory	57,288.62	35,407.26	21,881.36	61.80%
Supplies	120,011.65	69,215.86	50,795.79	73.39%
Travel - Domestic	20,593.89	12,369.68	8,224.21	66.49%
Travel - Foreign	26,585.95	21,104.19	5,481.76	25.97%
Utilities	365,506.86	276,631.94	88,874.92	32.13%
Other Direct Costs	42,738.15	43,412.37	(674.22)	-1.55%
Unallow/Unbill Costs	68,578.28	68,441.29	136.99	0.20%
TOTAL DIRECT COSTS	3,061,818.13	2,100,127.59	961,690.54	45.79%
INDIRECT COSTS				
Fringe Benefits	483,003.09	447,150.58	35,852.51	8.02%
Overhead	527,028.48	554,870.95	(27,842.47)	-5.02%
TOTAL INDIRECT COSTS	1,010,031.57	1,002,021.53	8,010.04	0.80%
GROSS PROFIT	(643,001.65)	(215,094.89)	(427,906.76)	198.94%
OTHER INCOME				
Water Treatment	72,789.06	59,414.82	13,374.24	22.51%
Miscellaneous Income	23,203.80	11,797.40	11,406.40	96.69%
Other Operating Income	563.90	-	563.90	100.00%
TOTAL OTHER INCOME	96,556.76	71,212.22	25,344.54	35.59%
OTHER EXPENSES				
Loss(Gain) on Sale of FA	1,904.54	-	1,904.54	100.00%
Reclass Incr Net Assets	(207,546.78)	(244,055.66)	36,508.88	-14.96%
TOTAL OTHER EXPENSES	(205,642.24)	(244,055.66)	38,413.42	-15.74%
NET INCOME/LOSS ()	\$ (340,802.65)	\$ 100,172.99	\$ (440,975.64)	-440.21%

South Dakota Science & Technology Authority
Available Cash
8/31/2015

Cash Total Checking/Savings	\$ 1,697,817.00
Cash With State Treasurer	<u>\$ 15,099,739.00</u>
Total Cash	\$ 16,797,556.00
Less: Restricted Funds	
Indemnification & Mine Closure	<u>\$ (8,878,756.00)</u>
Total Cash (Not Restricted)	\$ 7,918,800.00
Less: Total Liabilities w/out Pension Def. Inflows	<u>\$ (3,918,912.00)</u>
Available Cash	<u><u>\$ 3,999,888.00</u></u>

SDSTA Operating Budget Summary FY2016

Actual vs Budget

Aug. 2015 & YTD

	\$ Over/Under				\$ Over/Under				
	August 2015	Budget	Budget	% of Budget	Actual YTD	YTD Budget	Budget	% of Budget	% Remaining
									100%
SDSTA (Authority) Direct Charges									
Board of Directors	\$18,078.00	\$19,517.00	\$1,439.00	92.63%	\$36,357.00	\$39,034.00	\$2,677.00	93.14%	6.86%
Executive Office	\$16,178.00	\$15,576.00	-\$602.00	103.87%	\$26,469.00	\$31,622.00	\$5,153.00	83.70%	16.30%
Communications	\$10,889.00	\$15,871.00	\$4,982.00	68.61%	\$21,551.00	\$33,080.00	\$11,529.00	65.15%	34.85%
Science Center E & O	-\$215.00	\$0.00	\$215.00	100.0%	\$23,986.00	\$25,749.00	\$1,763.00	93.15%	6.85%
Science Liaison	-\$900.00	\$373.00	\$1,273.00	-241.29%	\$97.00	\$746.00	\$649.00	13.00%	87.00%
Sanf.L.Visitor C. (Director)	\$6,629.00	\$6,131.00	-\$498.00	108.12%	\$10,607.00	\$12,846.00	\$2,239.00	100.00%	0.00%
Subtotal	\$50,659.00	\$57,468.00	\$6,809.00	88.15%	\$119,067.00	\$143,077.00	\$24,010.00	83.22%	16.78%
Federal/State Funding - Direct Charges									
Fermi P.O.#618228 Staff Services	\$54,266.00	\$29,195.00	-\$25,071.00	185.87%	\$85,261.00	\$61,168.00	-\$24,093.00	139.39%	-39.39%
Fermi P.O.#618741 Excav.Des.	\$216,156.00	\$385,945.00	\$169,789.00	56.01%	\$216,156.00	\$771,890.00	\$555,734.00	28.00%	72.00%
Fermi P.O.#620223 Building/Infra.	\$554,942.00	\$758,226.00	\$203,284.00	73.19%	\$554,942.00	\$1,516,452.00	\$961,510.00	36.59%	63.41%
Fermi P.O.#622034 WasteRockSt.	\$5,525.00	\$15,700.00	\$10,175.00	35.19%	\$14,593.00	\$46,800.00	\$32,207.00	31.18%	68.82%
LBNL LUX C#6973786	\$11,038.00	\$13,350.00	\$2,312.00	82.68%	\$20,679.00	\$29,133.00	\$8,454.00	70.98%	29.02%
LBNL Operations C#6994297	\$951,012.00	\$1,089,805.00	\$138,793.00	87.26%	\$1,580,239.00	\$1,820,195.00	\$239,956.00	86.82%	13.18%
LBNL LUX/Zeplin C#7093667	\$13,436.00	\$14,322.00	\$886.00	93.81%	\$21,229.00	\$29,764.00	\$8,535.00	71.32%	28.68%
MJD (Majorana) # 5-4473	\$1,869.00	\$2,000.00	\$131.00	93.45%	\$3,909.00	\$4,000.00	\$91.00	97.73%	2.28%
CUBED - USD	\$11.00	\$500.00	\$489.00	2.2%	\$730.00	\$1,000.00	\$270.00	73.00%	27.00%
Sanf.Sci.Ed.Center - GOED Funded	\$78,857.00	\$25,000.00	-\$53,857.00	315.43%	\$78,857.00	\$50,000.00	-\$28,857.00	157.71%	-57.71%
U. of Minn. DUGL#A003778902	\$0.00	\$0.00	\$0.00	0.0%	\$0.00	\$1,000.00	\$1,000.00	0.00%	100.00%
* Xilinx, Inc. P.O.#729923	\$203.00	\$570.00	\$367.00	35.61%	\$405.00	\$1,140.00	\$735.00	35.53%	64.47%
Subtotal	\$1,887,315.00	\$2,334,613.00	\$447,298.00	80.84%	\$2,577,000.00	\$4,332,542.00	\$1,755,542.00	59.48%	40.52%
Indirect Expenses									
Indirect Charges Personnel	\$87,247.00	\$89,145.00	\$1,898.00	97.87%	\$180,203.00	\$182,238.00	\$2,035.00	98.88%	1.12%
Indirect Charges Other	\$187,706.00	\$267,435.00	\$79,729.00	70.19%	\$394,154.00	\$432,934.00	\$38,780.00	91.04%	8.96%
Subtotal	\$274,953.00	\$356,580.00	\$81,627.00	77.11%	\$574,357.00	\$615,172.00	\$40,815.00	93.37%	6.63%
Totals	\$2,212,927.00	\$2,748,661.00	\$535,734.00	80.51%	\$3,270,424.00	\$5,090,791.00	\$1,820,367.00	64.24%	35.76%

* Private Corporation (Commercial Group)

SDSTA CAPEX Budget Summary FY15/16
Actual vs Budget
August 2015 & YTD

<u>Budget Area</u>	<u>Actual Month</u>	<u>FY2015 Monthly Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>Actual YTD</u>	<u>FY2015 YTD Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>% Remaining</u>
									100.00%
Operational CAPEX	\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%	\$ 2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%
TOTAL CAPEX	\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%	\$ 2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%

SD Science & Technology Authority
Operational CAPEX Budget
Monthly Actual vs Budget

Project #	Project Description	Aug. 2015	Budget	\$ Over/UnderBudget	% of Budget
CAP2012-27	Ross Shaft Furnishings Repl.M&S	\$ 189,417.90	\$ 256,990.00	\$ 67,572.10	73.71%
CAP2012-28	Work Decks	\$ 577.97	\$ 1,000.00	\$ 422.03	57.80%
CAP2012-32	SDSTA Personnel	\$ 170,778.92	\$ 203,410.00	\$ 32,631.08	83.96%
CAP2014-01	Sanford Visitor Center Design & Construction	\$ 80,470.28	\$ 100,000.00	\$ 19,529.72	80.47%
CAP2014-05	CASPAR Experiment Development	\$ -	\$ 50,225.00	\$ 50,225.00	0.00%
CAP2014-06	BHSU Jonas Science Building Renovation	\$ 320,942.64	\$ 250,000.00	\$ (70,942.64)	128.38%
CAP2014-09	CASPAR Facility Development	\$ 158,909.51	\$ 200,000.00	\$ 41,090.49	79.45%
CAP2014-11	BHSU Facility Development	\$ 149,357.44	\$ 70,000.00	\$ (79,357.44)	213.37%
CAP2016-01	Sanford Visitor Center Exhibit Davis Tribute	\$ 65,368.59	\$ 80,000.00	\$ 14,631.41	81.71%
CAP2016-02	LZ Surface & Facility Upgrades	\$ 58,228.05	\$ 20,000.00	\$ (38,228.05)	291.14%
CAP2016-03	LZ Xenon Gas	\$ -	\$ -	\$ -	0.00%
Monthly Totals		\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%

SD Science & Technology Authority
Operational CAPEX Budget
YTD FY2016 Actual vs Budget

Project #	Project Description	August YTD	FY2016 Budget	\$ Over/UnderBudget	% of Budget	% Remaining
						100%
CAP2012-27	Ross Shaft Furnishings Repl.M&S	\$600,185.63	\$ 3,212,394.00	\$ 2,612,208.37	18.68%	81.32%
CAP2012-28	Work Decks	\$724.22	\$ 34,577.00	\$ 33,852.78	2.09%	97.91%
CAP2012-32	SDSTA Personnel	\$285,255.93	\$ 2,399,004.00	\$ 2,113,748.07	11.89%	88.11%
CAP2014-01	Sanford Visitor Center Design & Construction	\$150,284.25	\$ 337,017.00	\$ 186,732.75	44.59%	55.41%
CAP2014-05	CASPAR Experiment Development	\$0.00	\$ 301,347.00	\$ 301,347.00	0.00%	100.00%
CAP2014-06	BHSU Jonas Science Building Renovation	\$411,789.64	\$ 1,116,209.00	\$ 704,419.36	36.89%	63.11%
CAP2014-09	CASPAR Facility Development	\$745,150.58	\$ 959,709.00	\$ 214,558.42	77.64%	22.36%
CAP2014-11	BHSU Facility Development	\$304,684.13	\$ 275,000.00	\$ (29,684.13)	110.79%	-10.79%
CAP2016-01	Sanford Visitor Center Exhibit Davis Tribute	\$65,368.59	\$ 80,000.00	\$ 14,631.41	81.71%	18.29%
CAP2016-02	LZ Surface Facility Upgrades	\$68,172.05	\$ 1,500,000.00	\$ 1,431,827.95	4.54%	95.46%
CAP2016-03	LZ Xenon Gas	\$0.00	\$ 2,000,000.00	\$ 2,000,000.00	0.00%	100.00%
Totals		\$2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%

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Financial Report Continuation – Mr. Mike Headley

6B. Attached is the interest letter on state-held funds.

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SOUTH DAKOTA INVESTMENT COUNCIL

4009 West 49th Street, Suite 300

Sioux Falls, SD 57106-3784 USA

Phone: (605) 362-2820

September 1, 2015

Interest Proration Participating Agencies:

You recently received your 2015 interest proration voucher this week by e-mail. This represents interest on each agency fund's average balance for fiscal year 2015 as determined by SDCL 4-5-30. The Cash Flow Fund received \$18,200,556.24 of interest and net gains for the fiscal year on an average balance of \$1.342 billion. The rate (net of fees) for fiscal year 2015, payable in fiscal year 2016, is 1.25%.

Due to the decline in short-term interest rates and maturities of older, higher-rate securities, it is likely that the prorated interest rate for next year will be lower. Our best estimate for fiscal year 2016, payable in fiscal year 2017, is .90%.

If you have any questions regarding the calculation, please call Darcy McGuigan at the Bureau of Finance and Management or Sherry Nelson at the South Dakota Investment Council.

Sincerely,

Matthew L. Clark
State Investment Officer

MLC/szn
Enclosure

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Financial Report Continuation – Mr. Mike Headley

6C. Attached is the Fixed Asset Listing.

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SD Science & Technology Authority

Year to Date Reconciliation - 7/1/2014 through 6/30/2015

June 30, 2015

Year to Date 7/1/2014 through 6/30/2015 Cost of Fixed Assets

Accumulated Depreciation

000 - SD Science & Technology Authority										
Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
110 - Automobiles										
16 1998 Chevy Cube Truck	7/13/2007	7/13/2007	9,850.00		(9,850.00)	0.00	8,864.57		(8,864.57)	0.00
77 2003 Chevy Astro AWD	7/15/2008	7/15/2008	9,079.90			9,079.90	7,002.42	1,170.00		8,172.42
78 2003 Ford F250 63-1658	1/16/2009	1/16/2009	11,890.17			11,890.17	8,281.97	1,529.00		9,810.97
79 2000 Ford F150 V8 Whit	2/16/2009	2/16/2009	7,273.42			7,273.42	4,986.72	935.00		5,921.72
81 2001 Dodge W/Maintena	2/25/2009	2/25/2009	12,329.88			12,329.88	8,453.42	1,585.00		10,038.42
347 1999 Chevy Suburban W	8/11/2009	8/11/2009	6,618.17			6,618.17	4,184.00	851.00		5,035.00
348 2001 Dodge 2500 W/Mai	8/12/2009	8/12/2009	8,906.71			8,906.71	5,630.00	1,145.00		6,775.00
349 2004 Ford Explorer Sport	6/4/2010	6/4/2010	13,306.83			13,306.83	6,987.00	1,711.00		8,698.00
570 2009 Chevy G3500 Van	9/8/2014	9/8/2014		16,900.00		16,900.00		1,811.00		1,811.00
			79,255.08	16,900.00	(9,850.00)	86,305.08	54,390.10	10,737.00	(8,864.57)	56,262.53
120 - Building										
10 Ross Hoist Room	4/14/2006	4/14/2006	436,796.20			436,796.20	80,063.72	8,736.00		88,799.72
14 Ross Head Frame & Crus	4/14/2006	4/14/2006	421,551.65			421,551.65	77,268.90	8,431.00		85,699.90
19 Yates Head Frame & Cru	4/14/2006	4/14/2006	496,154.18			496,154.18	90,943.06	9,923.00		100,866.06
24 Mine Office - Admin Bld	4/14/2006	4/14/2006	461,316.99			461,316.99	84,556.23	9,226.00		93,782.23
25 Yates Hoist/MG Set Roo	4/14/2006	4/14/2006	797,826.88			797,826.88	146,241.43	15,957.00		162,198.43
26 Ross Substation Building	4/14/2006	4/14/2006	13,615.43			13,615.43	2,494.12	272.00		2,766.12
27 Ross Boiler	4/14/2006	4/14/2006	23,236.99			23,236.99	4,260.57	465.00		4,725.57
28 Ross Core Shed	4/14/2006	4/14/2006	6,785.02			6,785.02	1,245.17	136.00		1,381.17
29 Ross Dry	4/14/2006	4/14/2006	142,961.96			142,961.96	26,203.27	2,859.00		29,062.27
30 Ross Pipe Shop	4/14/2006	4/14/2006	50,830.92			50,830.92	9,319.05	1,017.00		10,336.05
31 LHD Warehouse	4/14/2006	4/14/2006	51,988.23			51,988.23	9,530.45	1,040.00		10,570.45
32 Ross Tramway Shed	4/14/2006	4/14/2006	68,757.90			68,757.90	12,602.31	1,375.00		13,977.31
33 Ross Air Tanks	4/14/2006	4/14/2006	7,760.79			7,760.79	1,421.45	155.00		1,576.45
34 Ross Ramp	4/14/2006	4/14/2006	7,091.37			7,091.37	1,300.69	142.00		1,442.69
35 Oro Hondo Fan Building	4/14/2006	4/14/2006	6,807.71			6,807.71	1,247.06	136.00		1,383.06
36 Oro Hondo Substation B	4/14/2006	4/14/2006	6,807.71			6,807.71	1,247.06	136.00		1,383.06
37 Shaft Heater Room @ #5	4/14/2006	4/14/2006	6,240.40			6,240.40	1,144.81	125.00		1,269.81
38 Tramway Roundhouse	4/14/2006	4/14/2006	7,624.64			7,624.64	1,395.11	152.00		1,547.11
39 Main Warehouse	4/14/2006	4/14/2006	142,224.46			142,224.46	26,066.84	2,844.00		28,910.84
41 Bottle Gas Storage	4/14/2006	4/14/2006	20,967.75			20,967.75	3,841.55	419.00		4,260.55

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Year to Date 7/1/2014 through 6/30/2015

Cost of Fixed Assets

Accumulated Depreciation

000 - SD Science & Technology Authority										
Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
120 - Building										
42 Tramway	4/14/2006	4/14/2006	177,908.22			177,908.22	32,609.19	3,558.00		36,167.19
43 Iron House	4/14/2006	4/14/2006	60,044.02			60,044.02	11,006.48	1,201.00		12,207.48
44 Machine Shop	4/14/2006	4/14/2006	257,142.32			257,142.32	47,134.13	5,143.00		52,277.13
45 Foundry	4/14/2006	4/14/2006	162,810.11			162,810.11	29,841.56	3,256.00		33,097.56
46 Battery Repair Building	4/14/2006	4/14/2006	26,141.62			26,141.62	4,792.51	523.00		5,315.51
47 Bit Shop	4/14/2006	4/14/2006	5,446.17			5,446.17	998.65	109.00		1,107.65
48 Paint Shop	4/14/2006	4/14/2006	7,715.41			7,715.41	1,412.67	154.00		1,566.67
50 East Substation Building	4/14/2006	4/14/2006	6,807.71			6,807.71	1,247.06	136.00		1,383.06
51 Wash Rack	4/14/2006	4/14/2006	7,148.10			7,148.10	1,310.41	143.00		1,453.41
52 Steady Head Tank	4/14/2006	4/14/2006	8,271.37			8,271.37	1,513.98	165.00		1,678.98
53 Yates Safety & Dry	4/14/2006	4/14/2006	215,259.87			215,259.87	39,455.46	4,305.00		43,760.46
54 Yates Power Substation E	4/14/2006	4/14/2006	11,436.96			11,436.96	2,097.66	229.00		2,326.66
55 Yates Bosses Office	4/14/2006	4/14/2006	6,490.02			6,490.02	1,190.60	130.00		1,320.60
57 Yates Lamp Room	4/14/2006	4/14/2006	10,620.03			10,620.03	1,944.61	212.00		2,156.61
58 Yates Dust Collector	4/14/2006	4/14/2006	3,630.78			3,630.78	667.43	73.00		740.43
59 Yates Sawmill	4/14/2006	4/14/2006	33,947.79			33,947.79	6,222.74	679.00		6,901.74
60 Used Oil Storage Tank	4/14/2006	4/14/2006	2,042.31			2,042.31	375.12	41.00		416.12
61 Yates Cooling Tower	4/14/2006	4/14/2006	5,446.17			5,446.17	998.65	109.00		1,107.65
62 Yates Compressor	4/14/2006	4/14/2006	173,180.53			173,180.53	31,745.38	3,464.00		35,209.38
63 Motor Repair Shop	4/14/2006	4/14/2006	17,473.13			17,473.13	3,200.46	349.00		3,549.46
64 WW Influent Building	4/14/2006	4/14/2006	645,487.44			645,487.44	118,317.04	12,910.00		131,227.04
65 WW Lab/Fishouse	4/14/2006	4/14/2006	134,476.55			134,476.55	24,651.47	2,690.00		27,341.47
66 WW Mechanical Building;	4/14/2006	4/14/2006	727,249.18			727,249.18	133,302.53	14,545.00		147,847.53
67 WW Warehouse	4/14/2006	4/14/2006	174,012.66			174,012.66	31,894.70	3,480.00		35,374.70
68 WW Sandfilter Building	4/14/2006	4/14/2006	917,399.02			917,399.02	168,156.40	18,348.00		186,504.40
338 Building Closing Costs	1/31/2007	1/31/2007	63,820.42			63,820.42	9,974.67	1,276.00		11,250.67
73 WW Protec Building 56X	12/1/2008	12/1/2008	64,632.77			64,632.77	14,433.10	2,585.00		17,018.10
74 WW Valve Building 9X1	12/16/2008	12/16/2008	15,178.78			15,178.78	1,671.79	304.00		1,975.79
75 WW Pole Frame Building	2/5/2009	2/5/2009	104,518.82			104,518.82	11,320.99	2,090.00		13,410.99
			7,223,085.46	0.00	0.00	7,223,085.46	1,315,880.29	145,753.00	0.00	1,461,633.29
130 - Computer Hardware										
83 2950 Windows Server 20	5/30/2009	5/30/2009	5,033.00			5,033.00	5,033.00			5,033.00
84 2950 Windows Server 20	5/30/2009	5/30/2009	7,294.02			7,294.02	7,294.00			7,294.00
85 2950 Windows Server 20	5/30/2009	5/30/2009	5,033.00			5,033.00	5,033.00			5,033.00
86 2950 Windows Server 20	5/30/2009	5/30/2009	6,911.21			6,911.21	6,911.00			6,911.00

Accumulated Depreciation

Cost of Fixed Assets

Year to Date 7/1/2014 through 6/30/2015

000 - SD Science & Technology Authority

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
130 - Computer Hardware										
87 2950 Windows Web Serv	5/30/2009	5/30/2009	5,424.45			5,424.45	5,424.00			5,424.00
88 Rack Server RACK	5/30/2009	5/30/2009	5,700.94			5,700.94	5,700.02			5,700.02
89 Rack Server RACK	5/30/2009	5/30/2009	5,700.94			5,700.94	5,700.02			5,700.02
90 2950 Windows Server 20	5/30/2009	5/30/2009	5,033.00			5,033.00	5,033.00			5,033.00
91 DL2000 Windows Server	5/30/2009	5/30/2009	19,609.68			19,609.68	19,609.00			19,609.00
92 DL2000 Windows Server	5/30/2009	5/30/2009	14,861.57			14,861.57	14,860.69			14,860.69
95 Router Kit 7609-2SUP72	5/30/2009	5/30/2009	56,935.00			56,935.00	56,934.92			56,934.92
96 Catalyst 48-Port 10/100/1	5/30/2009	5/30/2009	8,910.00			8,910.00	8,910.00			8,910.00
97 Catalyst 48-Port 10/100/1	5/30/2009	5/30/2009	8,938.50			8,938.50	8,937.98			8,937.98
98 SSG 550M System 1GB 1	5/30/2009	5/30/2009	7,350.00			7,350.00	7,350.00			7,350.00
99 SA2500 Secure Access 2:	5/30/2009	5/30/2009	7,906.50			7,906.50	7,905.78			7,905.78
100 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
101 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
102 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
103 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
104 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
105 41213 Management Swit:	5/30/2009	5/30/2009	6,196.90			6,196.90	6,196.28			6,196.28
106 41517 48 Port TX 12800	5/30/2009	5/30/2009	6,510.00			6,510.00	6,510.00			6,510.00
107 41517 48 Port TX 12800	5/30/2009	5/30/2009	6,510.00			6,510.00	6,510.00			6,510.00
108 41517 48 Port TX 12800	5/30/2009	5/30/2009	6,510.00			6,510.00	6,510.00			6,510.00
109 41544 48 Port GBIC 128:	5/30/2009	5/30/2009	9,916.90			9,916.90	9,916.28			9,916.28
110 41544 48 Port GBIC 128:	5/30/2009	5/30/2009	9,916.90			9,916.90	9,916.28			9,916.28
111 41544 48 Port GBIC 128:	5/30/2009	5/30/2009	9,916.90			9,916.90	9,916.28			9,916.28
112 41517 BD 12800 Manag:	5/30/2009	5/30/2009	6,510.00			6,510.00	6,510.00			6,510.00
113 41517 BD 12800 Manag:	5/30/2009	5/30/2009	6,510.00			6,510.00	6,510.00			6,510.00
114 SSG 550M System 1GB 1	5/30/2009	5/30/2009	7,350.00			7,350.00	7,350.00			7,350.00
115 SA2500 Secure Access 2:	5/30/2009	5/30/2009	7,906.50			7,906.50	7,905.78			7,905.78
116 41544 BD 12800 Manag:	5/30/2009	5/30/2009	9,916.90			9,916.90	9,916.28			9,916.28
93 2950 Windows Server 20	6/30/2009	6/30/2009	6,448.96			6,448.96	6,448.00			6,448.00
94 Cosign Appliance Windo	6/30/2009	6/30/2009	8,600.00			8,600.00	8,600.00			8,600.00
350 Virtual Windows Server	6/1/2010	6/1/2010	8,840.42			8,840.42	7,219.00	1,621.00		8,840.00
351 Server Rack	6/30/2010	6/30/2010	7,986.99			7,986.99	6,388.00	1,598.00		7,986.00
352 PLC Mine Monitoring Sy	6/30/2010	6/30/2010	7,910.20			7,910.20	6,328.00	1,582.00		7,910.00
429 PLC Mine Monitoring Sy	7/15/2010	7/15/2010	2,343.71			2,343.71	1,876.00	467.00		2,343.00
433 PLC Mine Monitoring Sy	4/1/2011	4/1/2011	19,866.94			19,866.94	12,912.00	3,973.00		16,885.00

Year to Date 7/1/2014 through 6/30/2015

Cost of Fixed Assets

000 - SD Science & Technology Authority

Accumulated Depreciation

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
130 - Computer Hardware										
549 Apple MP 3.5 1TB 32GB	3/31/2014	3/31/2014	5,170.42			5,170.42	258.00	1,034.00		1,292.00
583 Power Edge Server System	1/26/2010	6/30/2015	6,898.07			6,898.07	5,584.16			5,584.16
586 Dell Equal Logic PS1000	4/27/2011	6/30/2015	31,121.72			31,121.72	21,859.34			21,859.34
587 PowerVault MD1000 Sto	11/18/2011	6/30/2015	8,131.40			8,131.40	4,646.49			4,646.49
588 PowerVault MD1000 Sto	11/18/2011	6/30/2015	8,131.40			8,131.40	4,646.49			4,646.49
600 Virtual HP Server	6/29/2015	6/30/2015		17,362.50		17,362.50				0.00
601 Virtual HP Server	6/29/2015	6/30/2015		17,362.50		17,362.50				0.00
			416,747.54	34,725.00	0.00	451,472.54	382,050.47	10,275.00	0.00	392,325.47
140 - Equipment & Fixtures										
119 Telephone Equipment	6/1/2006	6/1/2006	3,927.47			3,927.47	3,608.69	318.00		3,926.69
120 Kubota RTV900T6H Util	10/31/2006	10/31/2006	16,535.00			16,535.00	12,679.33	1,654.00		14,333.33
121 John Deere 304J Wheel L	11/30/2006	11/30/2006	89,701.26			89,701.26	68,022.83	8,970.00		76,992.83
122 Solomon Corp 1000kva.1	3/16/2007	3/16/2007	8,017.33			8,017.33	2,450.43	200.00		2,650.43
179 Softstart Controllers 700f	6/30/2007	6/30/2007	167,350.00			167,350.00	66,941.67	11,157.00		78,098.67
123 Oxygen Booster Pumps C	7/1/2007	7/1/2007	21,400.00			21,400.00	14,980.00	2,140.00		17,120.00
124 Command Modules Com	7/1/2007	7/1/2007	18,589.00			18,589.00	18,589.00			18,589.00
125 Self-Contained Breathing	7/1/2007	7/1/2007	97,720.00			97,720.00	97,720.00			97,720.00
207 Motor GE 700HP HL840	9/24/2007	9/24/2007	28,370.67			28,370.67	8,508.53	1,418.00		9,926.53
154 700HP Kirk Timbervard :	11/29/2007	11/29/2007	25,860.76			25,860.76	5,172.03	862.00		6,034.03
168 Transformer 225 KVA TI	12/17/2007	12/17/2007	12,355.22			12,355.22	1,853.88	309.00		2,162.88
126 Safety Apparatus (7 pack	12/31/2007	12/31/2007	48,860.00			48,860.00	31,759.00	4,886.00		36,645.00
196 Ross Headframe Air Unit	12/31/2007	12/31/2007	10,817.00			10,817.00	6,491.70	1,082.00		7,573.70
331 Tsurumi Pumps LH675-6	2/4/2008	2/4/2008	22,279.36			22,279.36	5,346.18	891.00		6,237.18
213 Transformer GE 500KVA	2/27/2008	2/27/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75
220 Transformer GE 500KVA	2/27/2008	2/27/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75
221 Transformer Howard Ind	2/27/2008	2/27/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75
223 Transformer Howard Ind	2/27/2008	2/27/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75
224 Transformer Solomon 10	2/27/2008	2/27/2008	5,900.00			5,900.00	887.50	148.00		1,035.50
225 Transformer Solomon 10	2/27/2008	2/27/2008	5,900.00			5,900.00	887.50	148.00		1,035.50
226 Transformer Solomon 10	2/27/2008	2/27/2008	5,900.00			5,900.00	887.50	148.00		1,035.50
227 Transformer Howard Ind	2/27/2008	2/27/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75
228 Transformer GE 75KVA	2/27/2008	2/27/2008	5,800.00			5,800.00	870.00	145.00		1,015.00
229 Transformer GE 75KVA	2/27/2008	2/27/2008	5,800.00			5,800.00	870.00	145.00		1,015.00
230 Transformer GE 75KVA	2/27/2008	2/27/2008	5,800.00			5,800.00	870.00	145.00		1,015.00
218 Transformer GE 500KVA	2/28/2008	2/28/2008	7,350.00			7,350.00	1,103.75	184.00		1,287.75

Cost of Fixed Assets

Accumulated Depreciation

Year to Date 7/1/2014 through 6/30/2015

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
129 3 Ton Locomotive Batter	2/29/2008	2/29/2008	7,884.00			7,884.00	7,884.00			7,884.00
178 Skid Tanks 4X4X12 (4)	3/6/2008	3/6/2008	24,872.90			24,872.90	24,872.90	995.00		6,964.92
201 Pump Ingersoll Rand 037	3/12/2008	3/12/2008	91,206.72			91,206.72	91,206.72	3,648.00		25,536.27
211 Transformer GE 500KVA	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
212 Transformer GE 500KVA	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
214 Transformer Westinghou	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
216 Transformer Westinghou	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
217 Transformer Westinghou	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
219 Transformer GE 500KVA	3/25/2008	3/25/2008	7,350.00			7,350.00	7,350.00	184.00		1,287.75
130 Kyocera Color Copier KN	4/30/2008	4/30/2008	6,749.00			6,749.00	6,749.00			6,749.00
131 Kyocera Color Copier KN	4/30/2008	4/30/2008	7,081.00			7,081.00	7,081.00			7,081.00
144 Cranes	4/30/2008	4/30/2008	100,509.34			100,509.34	100,509.34	1,340.00		9,380.12
204 Motor GE 700HP FM84C	5/6/2008	5/6/2008	32,772.50			32,772.50	32,772.50	1,639.00		11,472.63
190 Troll 9500 Water Sample	5/14/2008	5/14/2008	8,325.92			8,325.92	8,325.92	832.00		5,824.59
180 Axial Flow Mine Fan 15C	5/30/2008	5/30/2008	53,484.75			53,484.75	53,484.75	2,674.00		18,718.24
127 Draeger Tester 6100	5/31/2008	5/31/2008	6,010.95			6,010.95	6,010.95			6,010.95
142 Base Interface 4 channel	6/18/2008	6/18/2008	6,011.00			6,011.00	6,011.00	601.00		4,207.10
132 Telephone System Additi	6/30/2008	6/30/2008	11,371.31			11,371.31	11,371.31	1,137.00		7,959.00
165 Ross Cage	6/30/2008	6/30/2008	40,179.02		(40,179.02)	0.00	24,107.90		(24,107.90)	0.00
166 Ross Hoist (2)	6/30/2008	6/30/2008	121,842.89			121,842.89	9,749.57	1,625.00		11,374.57
169 Transformer GE 5MVA N	7/1/2008	7/1/2008	5,000.00			5,000.00	750.00	125.00		875.00
171 Transformer GE 1500KV	7/1/2008	7/1/2008	5,000.00			5,000.00	750.00	125.00		875.00
172 Transformer GE 10,000K	7/1/2008	7/1/2008	10,000.00			10,000.00	1,500.00	250.00		1,750.00
173 Transformer GE 20,000K	7/1/2008	7/1/2008	15,000.00			15,000.00	2,250.00	375.00		2,625.00
174 Transformer GE 10,000 F	7/1/2008	7/1/2008	10,000.00			10,000.00	1,500.00	250.00		1,750.00
175 Transformer GE 10,000K	7/1/2008	7/1/2008	10,000.00			10,000.00	1,500.00	250.00		1,750.00
247 MG Sets (2) Yates	7/1/2008	7/1/2008	60,000.00			60,000.00	4,800.00	800.00		5,600.00
235 FLYGT Centrifugal Pumj	7/23/2008	7/23/2008	11,997.23			11,997.23	2,839.90	480.00		3,319.90
197 Ross Hoist Bldg (3) Boik	7/31/2008	7/31/2008	125,245.77			125,245.77	74,100.86	12,524.00		86,624.86
167 Security Monitoring Gate	8/1/2008	8/1/2008	23,126.00			23,126.00	13,684.88	2,313.00		15,997.88
202 Pump Ingersoll Rand 213	8/1/2008	8/1/2008	22,508.00			22,508.00	5,325.29	900.00		6,225.29
203 Pump Ingersoll Rand 675	8/1/2008	8/1/2008	130,646.97			130,646.97	30,920.39	5,226.00		36,146.39
234 Diesel Generator - WWTI	8/1/2008	8/1/2008	5,000.00			5,000.00	2,958.33	500.00		3,458.33
236 FLYGT 10HP Pumps (2)	8/1/2008	8/1/2008	12,000.00			12,000.00	2,840.00	480.00		3,320.00
237 FLYGT 15HP Pumps (2)	8/1/2008	8/1/2008	18,000.00			18,000.00	4,260.00	720.00		4,980.00

Accumulated Depreciation

Cost of Fixed Assets

Year to Date 7/1/2014 through 6/30/2015

000 - SD Science & Technology Authority											
Sys ID	Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures											
239	Pilot RBC	8/1/2008	8/1/2008	5,000.00			5,000.00	591.67	100.00		691.67
240	Root Blowers (2)	8/1/2008	8/1/2008	10,000.00			10,000.00	5,916.67	1,000.00		6,916.67
241	Rotating Biological Cont.	8/1/2008	8/1/2008	206,014.95			206,014.95	24,376.94	4,120.00		28,496.94
242	Sand Filter Galiger Pump	8/1/2008	8/1/2008	15,000.00			15,000.00	3,550.00	600.00		4,150.00
243	Sand Filters (3) WWTP	8/1/2008	8/1/2008	45,000.00			45,000.00	5,325.00	900.00		6,225.00
245	Soda Ash System	8/1/2008	8/1/2008	9,573.70			9,573.70	1,130.52	191.00		1,321.52
188	Electric Winch (WE271)	8/15/2008	8/15/2008	47,187.00			47,187.00	5,585.10	944.00		6,529.10
231	Fume Hood for Lab Cabii	8/22/2008	8/22/2008	5,989.95			5,989.95	3,494.16	599.00		4,093.16
205	Motor GE 700HP FM84C	8/25/2008	8/25/2008	38,004.39			38,004.39	11,083.52	1,900.00		12,983.52
156	MG Sets (2) Ross	8/31/2008	8/31/2008	60,000.00			60,000.00	4,666.67	800.00		5,466.67
194	Yates Hoists (2)	8/31/2008	8/31/2008	89,168.26			89,168.26	6,935.76	1,189.00		8,124.76
209	Motor GE 700HP HL840	9/22/2008	9/22/2008	31,362.30			31,362.30	9,016.09	1,568.00		10,584.09
150	Kubota GL7000 Generatc	10/21/2008	10/21/2008	5,300.00			5,300.00	3,003.33	530.00		3,533.33
232	Cornell Pumps W/Baldor	10/29/2008	10/29/2008	27,102.98			27,102.98	6,142.75	1,084.00		7,226.75
157	Miller Trailblazer 3020 V	11/5/2008	11/5/2008	7,430.00			7,430.00	4,210.33	743.00		4,953.33
137	40 Unit Cap Lamp Chrg	11/20/2008	11/20/2008	5,253.00			5,253.00	2,931.43	525.00		3,456.43
206	Motor GE 700HP FM83S	11/24/2008	11/24/2008	35,025.30			35,025.30	9,776.57	1,751.00		11,527.57
149	FSM-60S Fusion Splice F	11/28/2008	11/28/2008	19,810.00			19,810.00	7,375.39	1,321.00		8,696.39
136	Admin. Bldg. Heating/Cc	11/30/2008	11/30/2008	32,493.88			32,493.88	18,140.48	3,249.00		21,389.48
244	Seepex 200 GPM Pump /	12/15/2008	12/15/2008	16,316.24			16,316.24	3,645.71	653.00		4,298.71
238	Hoffman 3R Wall Mount	12/24/2008	12/24/2008	11,657.72			11,657.72	4,273.59	777.00		5,050.59
148	Franklin 8" Sand Fighter	12/29/2008	12/29/2008	44,457.42			44,457.42	12,226.44	2,223.00		14,449.44
161	1,000,000BTU Indirect F	12/30/2008	12/30/2008	15,537.00			15,537.00	8,546.85	1,554.00		10,100.85
143	(1) Benshaw Softstart 70C	1/6/2009	1/6/2009	35,257.43			35,257.43	12,925.25	2,350.00		15,275.25
162	VFD Pump Controller 15	2/2/2009	2/2/2009	23,100.00			23,100.00	8,341.67	1,540.00		9,881.67
163	VFD Pump Controller 20	2/2/2009	2/2/2009	46,200.00			46,200.00	16,683.33	3,080.00		19,763.33
160	Portable Air Conditioner	2/6/2009	2/6/2009	11,325.40			11,325.40	6,131.89	1,132.00		7,263.89
146	Float Valves for Yates (1-	2/9/2009	2/9/2009	114,346.31			114,346.31	61,939.43	11,435.00		73,374.43
145	Crane #6 Winze Undergrn	2/19/2009	2/19/2009	10,631.95			10,631.95	757.25	142.00		899.25
134	Panasonic PTF200TU Wi	2/24/2009	2/24/2009	7,353.83			7,353.83	3,920.13	735.00		4,655.13
200	Pump Ingersoll Rand 107	2/25/2009	2/25/2009	122,676.93			122,676.93	26,170.69	4,907.00		31,077.69
208	Motor GE 700HP ZRH28	3/5/2009	3/5/2009	27,154.00			27,154.00	7,242.57	1,358.00		8,600.57
158	3000HP American David	3/6/2009	3/6/2009	78,752.15			78,752.15	14,000.02	2,625.00		16,625.02
199	Pump Ingersoll Rand 100	3/28/2009	3/28/2009	147,258.51			147,258.51	30,922.59	5,890.00		36,812.59
192	Western Tornado Sand S	4/1/2009	4/1/2009	5,168.50			5,168.50	2,714.21	517.00		3,231.21

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000 - SD Science & Technology Authority										
Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
193 Western Ultramount Pro I	4/1/2009	4/1/2009	5,247.63			5,247.63	2,756.19	525.00		3,281.19
147 Danfoss Flowmatic Chec	4/2/2009	4/2/2009	6,919.11			6,919.11	3,632.98	692.00		4,324.98
198 Pump Ingersoll Rand 372	4/30/2009	4/30/2009	55,987.45			55,987.45	11,568.25	2,239.00		13,807.25
191 Watertank Carbon steel 9	5/8/2009	5/8/2009	12,880.41			12,880.41	2,660.87	515.00		3,175.87
164 VFD 150 HP Control Par	5/14/2009	5/14/2009	12,705.00			12,705.00	4,376.17	847.00		5,223.17
181 Trojan 3.25 Locomotive	6/10/2009	6/10/2009	51,615.60			51,615.60	11,849.23	2,331.00		14,180.23
182 Battery for Trojan Locom	6/10/2009	6/10/2009	11,000.00			11,000.00	7,985.95	1,571.00		9,556.95
153 Huron 560 Wall Tank an	6/11/2009	6/11/2009	6,098.08			6,098.08	1,550.41	305.00		1,855.41
138 Ansul Inergen Fire Suppr	6/23/2009	6/23/2009	12,919.00			12,919.00	4,305.00	861.00		5,166.00
155 Lift Bag Kit Light US&R	6/25/2009	6/25/2009	16,750.00			16,750.00	8,375.00	1,675.00		10,050.00
135 Telephone Expansion	6/26/2009	6/26/2009	28,249.27			28,249.27	14,125.00	2,825.00		16,950.00
139 2008 Artic Cat 700 Dies	6/30/2009	6/30/2009	10,244.54			10,244.54	6,950.00	1,390.00		8,340.00
140 2008 Artic Cat 700 Dies	6/30/2009	6/30/2009	10,244.54			10,244.54	6,950.00	1,390.00		8,340.00
141 2008 Artic Cat 700 Dies	6/30/2009	6/30/2009	10,244.55			10,244.55	6,950.00	1,390.00		8,340.00
151 Portable Generator 100K'	6/30/2009	6/30/2009	27,100.00			27,100.00	13,550.00	2,710.00		16,260.00
195 Ross Fuel Tank/Stand/Cc	6/30/2009	6/30/2009	21,100.39			21,100.39	10,550.00	2,110.00		12,660.00
353 JD Skid Steer 315 W/CE	7/18/2009	7/18/2009	23,241.00			23,241.00	11,426.00	2,324.00		13,750.00
354 Trojan 3.25 Locomotive	8/28/2009	8/28/2009	51,192.71			51,192.71	11,165.00	2,310.00		13,475.00
355 36Cell/72 Volt Battery fi	8/28/2009	8/28/2009	11,000.00			11,000.00	10,633.00	367.00		11,000.00
356 Sanyo Air Conditioning S	9/1/2009	9/1/2009	41,401.66			41,401.66	20,010.00	4,140.00		24,150.00
357 F-16A Dry Ice Blast Unit	9/17/2009	9/17/2009	17,750.00			17,750.00	8,431.00	1,775.00		10,206.00
358 High Voltage Cable Testi	9/23/2009	9/23/2009	7,920.00			7,920.00	3,762.00	792.00		4,554.00
396 Panasonic Data Video Pr	9/30/2009	9/30/2009	6,797.47			6,797.47	6,456.00	341.00		6,797.00
359 Water Meter LUX Surfac	10/1/2009	10/1/2009	6,011.30			6,011.30	2,855.00	601.00		3,456.00
360 Wall Mounted Enclosure	10/1/2009	10/1/2009	7,200.00			7,200.00	2,280.00	480.00		2,760.00
361 8-1/2' Western Ultramou	10/1/2009	10/1/2009	5,309.25			5,309.25	2,522.00	531.00		3,053.00
362 Beshaw Softstart 700HF	10/1/2009	10/1/2009	35,257.43			35,257.43	11,163.00	2,350.00		13,513.00
364 Vertical Diesel Symo Pov	10/22/2009	10/22/2009	8,665.05			8,665.05	4,042.00	866.00		4,908.00
365 Vertical Diesel Symo Pov	10/22/2009	10/22/2009	5,721.30			5,721.30	2,669.00	572.00		3,241.00
366 Wall Mounted Enclosure	11/1/2009	11/1/2009	7,200.00			7,200.00	2,240.00	480.00		2,720.00
367 Spendrup 350HP Fan at C	11/1/2009	11/1/2009	83,092.63			83,092.63	19,390.00	4,155.00		23,545.00
368 500KVA Transformer3 P	11/1/2009	11/1/2009	18,465.41			18,465.41	2,156.00	462.00		2,618.00
369 Baldor VFD Motors 350f	11/1/2009	11/1/2009	61,000.00			61,000.00	14,233.00	3,050.00		17,283.00
370 Beshaw Switch Disconn	11/1/2009	11/1/2009	8,791.96			8,791.96	2,735.00	586.00		3,321.00
371 GE700HP GE Pump Mot	11/1/2009	11/1/2009	31,986.00			31,986.00	7,462.00	1,599.00		9,061.00

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Year to Date 7/1/2014 through 6/30/2015

Cost of Fixed Assets

000 - SD Science & Technology Authority

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
372 350HP Spondrup Fan at #	11/10/2009	11/10/2009	106,641.04			106,641.04	24,883.00	5,332.00		30,215.00
374 S&C PMX Modular Mett	12/1/2009	12/1/2009	27,059.00			27,059.00	8,268.00	1,804.00		10,072.00
375 GE 8000 Series Breaker I	12/3/2009	12/3/2009	6,464.69			6,464.69	1,975.00	431.00		2,406.00
376 GE Spectra Series Switch	12/3/2009	12/3/2009	7,239.85			7,239.85	2,214.00	483.00		2,697.00
377 (2) A Bradley Powerflex	12/3/2009	12/3/2009	15,068.40			15,068.40	4,606.00	1,005.00		5,611.00
378 Multi Media Sand Filter	12/3/2009	12/3/2009	615,021.84			615,021.84	56,375.00	12,300.00		68,675.00
397 Telephone System Upgra	12/7/2009	12/7/2009	17,712.14			17,712.14	8,117.00	1,771.00		9,888.00
379 Johnson Controls HVAC	1/1/2010	1/1/2010	18,921.00			18,921.00	8,514.00	1,892.00		10,406.00
380 Johnson Controls HVAC	1/1/2010	1/1/2010	20,427.00			20,427.00	9,193.00	2,043.00		11,236.00
381 HVAC Air Handling Uni	1/1/2010	1/1/2010	20,862.92			20,862.92	9,387.00	2,086.00		11,473.00
382 Chemical Outdoor Storag	1/15/2010	1/15/2010	28,869.55			28,869.55	6,494.00	1,443.00		7,937.00
383 HydraulicClamb/Pneuma	1/25/2010	1/25/2010	26,940.00			26,940.00	11,898.00	2,694.00		14,592.00
384 Fire Pump	2/1/2010	2/1/2010	13,163.08			13,163.08	5,812.00	1,316.00		7,128.00
385 Jockey Pump	2/1/2010	2/1/2010	13,163.08			13,163.08	5,812.00	1,316.00		7,128.00
386 HY-25XLT 2-1/2" Sq Dr	2/4/2010	2/4/2010	13,957.43			13,957.43	6,166.00	1,396.00		7,562.00
399 Telephone System LUX S	2/15/2010	2/15/2010	9,218.04			9,218.04	4,072.00	922.00		4,994.00
387 Wall Mounted Enclosure	3/1/2010	3/1/2010	7,200.00			7,200.00	2,080.00	480.00		2,560.00
388 S&C PMX Modular Mett	3/1/2010	3/1/2010	27,059.00			27,059.00	7,817.00	1,804.00		9,621.00
389 GE Switchgear	3/1/2010	3/1/2010	58,844.32			58,844.32	17,000.00	3,923.00		20,923.00
390 MQ Generator 15KW Mc	3/1/2010	3/1/2010	10,117.00			10,117.00	4,385.00	1,012.00		5,397.00
391 Atlas Copco XAS 185 Cf	3/1/2010	3/1/2010	8,924.50			8,924.50	3,865.00	892.00		4,757.00
392 Atlas Copco XAS 185 Cf	3/1/2010	3/1/2010	8,924.50			8,924.50	3,865.00	892.00		4,757.00
393 115V PSI Hytore Pump	3/30/2010	3/30/2010	5,108.37			5,108.37	2,172.00	511.00		2,683.00
394 Clean Room	5/31/2010	5/31/2010	116,000.00			116,000.00	47,367.00	11,600.00		58,967.00
395 S&C Metal Enclosed Fus	6/30/2010	6/30/2010	7,200.00			7,200.00	1,920.00	480.00		2,400.00
398 Telephone System Upgra	6/30/2010	6/30/2010	8,451.00			8,451.00	3,380.00	845.00		4,225.00
400 Telephone System Ross I	6/30/2010	6/30/2010	6,683.90			6,683.90	2,672.00	668.00		3,340.00
426 S&C Wall-Mounted Mett	7/1/2010	7/1/2010	7,200.00			7,200.00	1,920.00	480.00		2,400.00
430 Chem Grout Machine Pui	7/29/2010	7/29/2010	5,500.00			5,500.00	2,154.00	550.00		2,704.00
420 Bobcat Skidsteer S300 D	8/2/2010	8/2/2010	33,030.64			33,030.64	12,937.00	3,303.00		16,240.00
423 Air Compressor 125HP F	9/1/2010	9/1/2010	18,515.00			18,515.00	7,099.00	1,852.00		8,951.00
422 JD Angle Broom for Skid	9/3/2010	9/3/2010	5,925.00			5,925.00	2,270.00	592.00		2,862.00
421 S&C PMX Modular Mett	9/16/2010	9/16/2010	27,059.00			27,059.00	6,765.00	1,804.00		8,569.00
439 Ross Dry Phone/Data Sys	9/24/2010	9/24/2010	9,183.36			9,183.36	3,443.00	918.00		4,361.00
440 Ross Shaft UG Phone/Da	10/25/2010	10/25/2010	8,550.63			8,550.63	3,135.00	855.00		3,990.00

000 - SD Science & Technology Authority										
Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
441 Yates E&O Phone/Data S	11/30/2010	11/30/2010	12,314.24			12,314.24	4,411.00	1,231.00		5,642.00
424 Radon Monitor Alpagua	12/1/2010	12/1/2010	15,028.98			15,028.98	5,386.00	1,503.00		6,889.00
416 Locomotive 1975 8 Ton #	1/27/2011	1/27/2011	130,000.00			130,000.00	63,451.00	18,571.00		82,022.00
417 Locomotive 1975 8 Ton #	1/27/2011	1/27/2011	130,000.00			130,000.00	63,451.00	18,571.00		82,022.00
418 Loader 2007 LT 210 #07-	1/27/2011	1/27/2011	195,000.00			195,000.00	66,625.00	19,500.00		86,125.00
427 Shotcrete Mixing Auger	2/28/2011	2/28/2011	18,450.00			18,450.00	6,150.00	1,845.00		7,995.00
438 Admin Building Phone/D	3/1/2011	3/1/2011	3,876.26			3,876.26	1,293.00	388.00		1,681.00
432 Loader 2007 LT350 #07-	5/31/2011	5/31/2011	230,000.00			230,000.00	70,917.00	23,000.00		93,917.00
451 JD XAS 375 CFM Air C	9/1/2011	9/1/2011	27,900.00			27,900.00	7,905.00	2,790.00		10,695.00
469 Transformer 45KVA 600	9/1/2011	9/1/2011	5,298.00			5,298.00	374.00	132.00		506.00
453 Battery Charger for 9-Ton	1/1/2012	1/1/2012	6,127.78			6,127.78	1,532.00	613.00		2,145.00
455 TEI 260 Hydraulic Percu	1/1/2012	1/1/2012	32,949.71			32,949.71	8,237.00	3,295.00		11,532.00
454 Lefon Portable Electric P	1/4/2012	1/4/2012	8,218.50			8,218.50	2,055.00	822.00		2,877.00
461 Lull 54' Telescopic Forkli	1/12/2012	1/12/2012	52,500.00			52,500.00	13,125.00	5,250.00		18,375.00
456 Ross Shaft Work Deck	1/20/2012	1/20/2012	16,395.00			16,395.00	3,963.00	1,640.00		5,603.00
459 JD 315 Skid Steer W/Buc	2/10/2012	2/10/2012	25,234.00			25,234.00	6,097.00	2,523.00		8,620.00
457 GE 1500KVA 480/277V	3/1/2012	3/1/2012	102,230.90			102,230.90	5,964.00	2,556.00		8,520.00
458 GE Switchboard 1500KV	3/1/2012	3/1/2012	20,762.10			20,762.10	3,229.00	1,384.00		4,613.00
462 Yates Hoist South Cage	5/1/2012	5/1/2012	123,484.05			123,484.05	26,754.00	12,348.00		39,102.00
480 Rope Dog System Yates	5/1/2012	5/1/2012	69,642.40			69,642.40	15,089.00	6,964.00		22,053.00
599 Yates Rope Dog System	5/1/2012	5/1/2012	227,216.99			227,216.99	41,721.00	19,256.00		60,977.00
463 Caterpillar Diesel Genera	5/3/2012	5/3/2012	54,313.83			54,313.83	11,767.00	5,431.00		17,198.00
464 Profi 1-Ton Air Hoist 25'	5/8/2012	5/8/2012	6,970.00			6,970.00	1,510.00	697.00		2,207.00
465 Profi 1-Ton Air Hoist 25'	5/8/2012	5/8/2012	6,970.00			6,970.00	1,510.00	697.00		2,207.00
470 S&C Metal Enclosed Swi	6/1/2012	6/1/2012	21,656.40			21,656.40	3,008.00	1,444.00		4,452.00
471 S&C Metal Enclosed Swi	6/1/2012	6/1/2012	21,656.40			21,656.40	3,008.00	1,444.00		4,452.00
472 S&C Metal Enclosed Swi	6/1/2012	6/1/2012	21,656.40			21,656.40	3,008.00	1,444.00		4,452.00
473 S&C Metal Enclosed Swi	6/1/2012	6/1/2012	21,656.40			21,656.40	3,008.00	1,444.00		4,452.00
474 S&C Metal Enclosed Swi	6/1/2012	6/1/2012	21,656.40			21,656.40	3,008.00	1,444.00		4,452.00
475 Multilin PQM II Meter fo	6/1/2012	6/1/2012	5,389.00			5,389.00	748.00	359.00		1,107.00
466 Scanstation C10 Laser Sc	6/5/2012	6/5/2012	59,609.44			59,609.44	12,419.00	5,961.00		18,380.00
467 Refuge Chamber 6X6X1	6/19/2012	6/19/2012	38,105.00			38,105.00	3,810.00	1,905.00		5,715.00
468 Refuge Chamber 6X6X1	6/19/2012	6/19/2012	38,105.00			38,105.00	3,810.00	1,905.00		5,715.00
496 Justice Fire & Safety Pan	7/1/2012	7/1/2012	7,588.00			7,588.00	1,012.00	506.00		1,518.00
497 Quincy Air Regulator	7/1/2012	7/1/2012	17,788.76			17,788.76	3,558.00	1,779.00		5,337.00

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Cost of Fixed Assets

600 - SD Science & Technology Authority

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
498 Cornell McKeon Rollup I	7/1/2012	7/1/2012	8,980.00			8,980.00	1,198.00	599.00		1,797.00
499 Rheem Water Heater	7/1/2012	7/1/2012	10,070.00			10,070.00	2,014.00	1,007.00		3,021.00
500 Johnson Controls Air Har	7/1/2012	7/1/2012	25,071.00			25,071.00	5,014.00	2,507.00		7,521.00
501 Johnson Controls Air Har	7/1/2012	7/1/2012	21,529.00			21,529.00	4,306.00	2,153.00		6,459.00
502 Johnson Controls Air Har	7/1/2012	7/1/2012	21,529.00			21,529.00	4,306.00	2,153.00		6,459.00
503 Johnson Controls Air Har	7/1/2012	7/1/2012	17,039.00			17,039.00	3,408.00	1,704.00		5,112.00
504 Johnson Controls Chiller	7/1/2012	7/1/2012	17,245.00			17,245.00	3,448.00	1,724.00		5,172.00
505 Johnson Controls Chiller	7/1/2012	7/1/2012	17,245.00			17,245.00	3,448.00	1,724.00		5,172.00
506 Johnson Controls Air Har	7/1/2012	7/1/2012	17,436.00			17,436.00	3,488.00	1,744.00		5,232.00
525 Line Power Transformers	7/1/2012	7/1/2012	5,000.00			5,000.00	250.00	125.00		375.00
526 LN Tank Concrete Pad	8/1/2012	8/1/2012	7,920.00			7,920.00	759.00	396.00		1,155.00
484 R&M Hoist 7.5 Ton	8/2/2012	8/2/2012	19,510.50			19,510.50	3,739.00	1,951.00		5,690.00
485 R&M Hoist 10 Ton	8/2/2012	8/2/2012	21,560.50			21,560.50	4,132.00	2,156.00		6,288.00
490 Skyclimber Suspended W	9/6/2012	9/6/2012	67,172.86			67,172.86	12,315.00	6,717.00		19,032.00
491 Skyclimber Electric Hoist	9/6/2012	9/6/2012	6,586.85			6,586.85	1,208.00	659.00		1,867.00
492 Skyclimber Electric Hoist	9/6/2012	9/6/2012	6,586.85			6,586.85	1,208.00	659.00		1,867.00
493 Skyclimber Electric Hoist	9/6/2012	9/6/2012	6,586.85			6,586.85	1,208.00	659.00		1,867.00
494 Skyclimber Electric Hoist	9/6/2012	9/6/2012	6,586.85			6,586.85	1,208.00	659.00		1,867.00
489 Ross Cage Work Deck	9/12/2012	9/12/2012	70,226.22			70,226.22	18,392.00	10,032.00		28,424.00
486 LUX Water Treatment Sy	9/25/2012	9/25/2012	147,582.73			147,582.73	17,218.00	9,839.00		27,057.00
483 North Skip Work Deck (f	9/28/2012	9/28/2012	30,837.94			30,837.94	7,709.00	4,405.00		12,114.00
487 Jib Crane Ceiling Mount	10/1/2012	10/1/2012	28,175.00			28,175.00	4,931.00	2,818.00		7,749.00
488 Jib Crane Ceiling Mount	10/1/2012	10/1/2012	30,450.00			30,450.00	5,329.00	3,045.00		8,374.00
508 S205 Skidsteer W/Forks	10/19/2012	10/19/2012	21,000.00			21,000.00	3,500.00	2,100.00		5,600.00
509 JLG T500 Towable Lift	10/19/2012	10/19/2012	25,000.00		(25,000.00)	0.00	4,167.00	833.00	(5,000.00)	0.00
495 LUX Water Tank 4850	10/22/2012	10/22/2012	364,225.82			364,225.82	40,470.00	24,282.00		64,752.00
524 Line Power Transformer 7	12/10/2012	12/10/2012	8,000.00			8,000.00	317.00	200.00		517.00
512 Profi 1 Ton Air Hoist 25' l	1/16/2013	1/16/2013	7,415.07			7,415.07	1,050.00	741.00		1,791.00
513 Caterpillar Diesel Genera	2/1/2013	2/1/2013	28,434.00			28,434.00	4,028.00	2,843.00		6,871.00
516 4850 Refuge Area Coolin	2/1/2013	2/1/2013	9,085.66			9,085.66	1,287.00	908.00		2,195.00
517 4850 Refuge Area Coolin	2/1/2013	2/1/2013	9,085.67			9,085.67	1,287.00	908.00		2,195.00
518 4850 Refuge Area Coolin	2/1/2013	2/1/2013	9,085.67			9,085.67	1,287.00	908.00		2,195.00
519 MS Scrubbing Systems L	2/1/2013	2/1/2013	17,040.00			17,040.00	2,414.00	1,704.00		4,118.00
520 MS Scrubbing Systems L	2/1/2013	2/1/2013	17,040.00			17,040.00	2,414.00	1,704.00		4,118.00
515 Ross Headframe Garage I	2/26/2013	2/26/2013	22,621.00			22,621.00	3,016.00	2,262.00		5,278.00

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Cost of Fixed Assets

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Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures										
523 Modification to Ross Wo	4/16/2013	4/16/2013	7,010.22			7,010.22	1,168.00	1,001.00		2,169.00
528 25HP Diesel Hydraulic P	6/15/2013	6/15/2013	11,070.85			11,070.85	1,199.00	1,107.00		2,306.00
536 IT Generator Concrete Pa	8/1/2013	8/1/2013	6,640.00			6,640.00	304.00	332.00		636.00
538 Yates Loading Dock	9/9/2013	9/9/2013	7,040.00			7,040.00	235.00	282.00		517.00
540 IT Generator Install	10/31/2013	10/31/2013	28,056.44			28,056.44	1,870.00	2,806.00		4,676.00
554 Hitachi CPWU9410 Proje	1/18/2014	1/18/2014	13,228.18			13,228.18	551.00	1,323.00		1,874.00
542 Chem Grout Machine Pui	3/10/2014	3/10/2014	5,909.59			5,909.59	197.00	591.00		788.00
547 Bolter J.H. Fletcher & Co	4/25/2014	4/25/2014	546,642.95			546,642.95	3,644.00	21,866.00		25,510.00
550 Big Blue 300 Pro Kubota	5/2/2014	5/2/2014	10,445.00			10,445.00	174.00	1,044.00		1,218.00
551 Big Blue 300 Pro Kubota	5/2/2014	5/2/2014	10,445.00			10,445.00	174.00	1,044.00		1,218.00
548 2014 Toolmaster Trailer	5/8/2014	5/8/2014	11,200.00			11,200.00	187.00	1,120.00		1,307.00
553 Ultrasonic Flaw Detector	6/9/2014	6/9/2014	11,742.78			11,742.78	98.00	1,174.00		1,272.00
579 Line Power Skid Transfor	7/1/2014	7/1/2014		5,000.00		5,000.00		125.00		125.00
580 Line Power Skid Transfor	7/1/2014	7/1/2014		8,000.00		8,000.00		200.00		200.00
566 Davis Campus Dehumidi	7/22/2014	7/22/2014		508,965.03		508,965.03		46,655.00		46,655.00
565 Fisher 2" Valves (2)	8/8/2014	8/8/2014		13,554.96		13,554.96		1,242.00		1,242.00
568 Canon EOS C100 Cinem	8/8/2014	8/8/2014		5,499.00		5,499.00		1,008.00		1,008.00
569 WTP Mix Tank	8/27/2014	8/27/2014		110,641.63		110,641.63		3,688.00		3,688.00
572 HVAC Unit - Adm. Builc	10/10/2014	10/10/2014		17,358.78		17,358.78		1,302.00		1,302.00
571 Concrete Bucket Dumas	10/22/2014	10/22/2014		18,509.51		18,509.51		1,763.00		1,763.00
573 Cement Hopper E-Z Fabr	10/22/2014	10/22/2014		18,195.00		18,195.00		1,733.00		1,733.00
577 Pressure Tank 660Gal on	11/5/2014	11/5/2014		6,081.27		6,081.27		405.00		405.00
574 Yates Work Platform (Sk	12/22/2014	12/22/2014		30,419.20		30,419.20		1,521.00		1,521.00
575 Thern Winch (Helical-Be	12/23/2014	12/23/2014		7,909.00		7,909.00		395.00		395.00
581 Mining Controls Portable	1/1/2015	1/1/2015		5,000.00		5,000.00		62.00		62.00
576 Profi 1-Ton Air Hoist 25'	1/26/2015	1/26/2015		7,675.00		7,675.00		320.00		320.00
578 JLG Electric Scissor Lift	2/24/2015	2/24/2015		20,470.00		20,470.00		682.00		682.00
582 Toshiba e-STUDIO 3530	1/25/2010	6/30/2015	7,002.00			7,002.00	5,584.98			5,584.98
584 Netowrk Video Recorder	5/4/2010	6/30/2015	5,984.00			5,984.00	3,546.11			3,546.11
585 Shot Tech Robotic Arm S	10/20/2010	6/30/2015	171,390.00			171,390.00	114,404.53			114,404.53
589 Topcon GPT Data Collec	11/21/2011	6/30/2015	9,850.00			9,850.00	3,775.79			3,775.79
590 Wolverine 25D Hydraulic	1/5/2012	6/30/2015	12,816.00			12,816.00				0.00
591 Micro 1000 Data Logger	1/9/2012	6/30/2015	7,705.14			7,705.14	4,402.96			4,402.96
592 Micro 1000 Data Logger	1/9/2012	6/30/2015	7,705.14			7,705.14	4,402.96			4,402.96
593 Mini Track Loader	4/13/2012	6/30/2015	22,546.19			22,546.19	7,515.34			7,515.34

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Sys ID	Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
140 - Equipment & Fixtures											
594	Vertical Diesel Symo Pov	6/26/2012	6/30/2015	14,023.44			14,023.44	6,844.83			6,844.83
595	IT Generac Generator	6/28/2013	6/30/2015	26,208.14			26,208.14	9,984.03			9,984.03
596	Kubota RTV Utility	11/20/2012	6/30/2015	11,542.33			11,542.33	3,060.44			3,060.44
597	Kubota RTV Utility	11/20/2012	6/30/2015	11,542.33			11,542.33	3,060.44			3,060.44
598	HID Video Conferencing	10/3/2010	6/30/2015	13,990.26			13,990.26	7,383.78			7,383.78
				9,102,777.42	783,278.38	(65,179.02)	9,820,876.78	2,411,043.95	627,928.00	(29,107.90)	3,009,864.05
150 - Furniture & Fixtures											
249	Blinds	6/1/2006	6/1/2006	1,877.92			1,877.92	1,877.25			1,877.25
250	6X8 Workstations - Adm	12/31/2008	12/31/2008	67,297.83			67,297.83	24,673.26	4,486.00		29,159.26
251	Blinds - Admin Bldg	2/1/2009	2/1/2009	5,035.75			5,035.75	2,729.82	504.00		3,233.82
				74,211.50	0.00	0.00	74,211.50	29,280.33	4,990.00	0.00	34,270.33
160 - Improvements											
189	Carpet - Admin Bldg	4/25/2006	4/25/2006	6,589.30			6,589.30	6,589.29			6,589.29
283	Office Remodel - Admin	6/1/2006	6/1/2006	19,584.00			19,584.00	15,828.40	1,958.00		17,786.40
284	Office Remodel/Painting	6/1/2006	6/1/2006	10,898.27			10,898.27	8,810.31	1,090.00		9,900.31
285	Yates Building Renovatic	2/14/2007	2/14/2007	16,714.32			16,714.32	2,611.43	334.00		2,945.43
263	Power Line East Sub Stat	7/27/2007	7/27/2007	31,222.00			31,222.00	3,744.44	624.00		4,368.44
269	Ross Guard Station	5/31/2008	5/31/2008	8,617.06			8,617.06	1,032.34	172.00		1,204.34
271	Ross Hoist Building	6/30/2008	6/30/2008	197,674.59			197,674.59	23,718.49	3,953.00		27,671.49
286	Kitchen Improvements - /	6/30/2008	6/30/2008	5,792.72			5,792.72	695.85	116.00		811.85
259	Gas Line System (Existin	7/1/2008	7/1/2008	5,795.00			5,795.00	1,391.80	232.00		1,623.80
261	Parking Lot - Admin Are	7/1/2008	7/1/2008	60,000.00			60,000.00	18,000.00	3,000.00		21,000.00
264	Power Line Oro Hondo 6'	7/1/2008	7/1/2008	8,250.00			8,250.00	990.00	165.00		1,155.00
265	Power Line Ross 69KV P	7/1/2008	7/1/2008	25,000.00			25,000.00	3,000.00	500.00		3,500.00
267	Rail System Underground	7/1/2008	7/1/2008	61,267.89			61,267.89	7,350.36	1,225.00		8,575.36
275	Ross Yard (Gravel Yard)	7/1/2008	7/1/2008	22,277.00			22,277.00	3,341.93	557.00		3,898.93
282	Yates Yard (Gravel Yard)	7/1/2008	7/1/2008	16,282.20			16,282.20	2,442.06	407.00		2,849.06
277	Yates Gas Line	11/24/2008	11/24/2008	17,695.65			17,695.65	3,952.90	708.00		4,660.90
288	Carpet/Vinyl - Admin Bld	1/1/2009	1/1/2009	53,826.21			53,826.21	29,606.31	5,383.00		34,989.31
256	Communications - Ross S	2/18/2009	2/18/2009	10,340.00			10,340.00	3,674.78	689.00		4,363.78
257	Communications - Yates	2/18/2009	2/18/2009	57,716.63			57,716.63	20,522.59	3,848.00		24,370.59
266	Propane Storage Building	2/25/2009	2/25/2009	16,200.00			16,200.00	1,728.00	324.00		2,052.00
270	Ross Headframe Crusher	3/1/2009	3/1/2009	26,409.12			26,409.12	2,816.06	528.00		3,344.06
278	Yates Headframe/Crushei	3/1/2009	3/1/2009	33,519.74			33,519.74	3,573.46	670.00		4,243.46
280	Yates Safety/Dry Buildin	3/1/2009	3/1/2009	52,177.41			52,177.41	5,567.85	1,044.00		6,611.85

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Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
160 - Improvements										
260 IT Room Electrical/Instal	3/4/2009	3/4/2009	41,618.32			41,618.32	11,098.64	2,081.00		13,179.64
279 Yates Hoist Building	4/14/2009	4/14/2009	159,110.28			159,110.28	16,705.55	3,182.00		19,887.55
272 Ross Pump System	6/12/2009	6/12/2009	963,663.60			963,663.60	195,947.00	38,547.00		234,494.00
258 Fiber Optic Network Syst	6/30/2009	6/30/2009	17,541.98			17,541.98	4,385.00	877.00		5,262.00
262 Power Distribution	6/30/2009	6/30/2009	783,887.52			783,887.52	78,390.00	15,678.00		94,068.00
268 Ross Dry Building	6/30/2009	6/30/2009	63,368.30			63,368.30	6,335.00	1,267.00		7,602.00
273 Ross Shaft	6/30/2009	6/30/2009	9,773,260.40			9,773,260.40	977,325.00	195,465.00		1,172,790.00
274 Ross Substation	6/30/2009	6/30/2009	277,760.27			277,760.27	27,775.00	5,555.00		33,330.00
276 WWTP Improvements	6/30/2009	6/30/2009	660,400.84			660,400.84	66,040.00	13,208.00		79,248.00
281 Yates Shaft	6/30/2009	6/30/2009	4,694,581.28			4,694,581.28	469,460.00	93,892.00		563,352.00
287 Admin Bldg Improvemen	6/30/2009	6/30/2009	382,643.40			382,643.40	38,265.00	7,653.00		45,918.00
407 Ross Substation Upgrade	3/1/2010	3/1/2010	79,000.94			79,000.94	6,847.00	1,580.00		8,427.00
409 Yates Shaft	4/1/2010	4/1/2010	2,185,614.49			2,185,614.49	185,776.00	43,712.00		229,488.00
402 LUX Surface Lab	5/1/2010	5/1/2010	1,563,830.79			1,563,830.79	130,321.00	31,277.00		161,598.00
403 Oro Hondo Substation U	5/15/2010	5/15/2010	85,015.90			85,015.90	7,083.00	1,700.00		8,783.00
404 Pole Frame Building	6/1/2010	6/1/2010	14,183.70			14,183.70	1,160.00	284.00		1,444.00
408 Yates Fencing	6/15/2010	6/15/2010	10,469.70			10,469.70	2,136.00	523.00		2,659.00
401 Fiber Optic Network Syst	6/30/2010	6/30/2010	19,495.55			19,495.55	3,900.00	975.00		4,875.00
405 Power Distribution Upgr	6/30/2010	6/30/2010	341,565.29			341,565.29	27,324.00	6,831.00		34,155.00
406 Ross Pumping System	6/30/2010	6/30/2010	159,652.84			159,652.84	25,544.00	6,386.00		31,930.00
447 Yates Parking Lot Resurf	9/24/2010	9/24/2010	259,641.41			259,641.41	97,365.00	25,964.00		123,329.00
445 Majorana Shotcreting Im	10/15/2010	10/15/2010	268,602.24			268,602.24	33,574.00	8,953.00		42,527.00
428 Ross Dry Renovations	10/30/2010	10/30/2010	243,726.84			243,726.84	17,875.00	4,875.00		22,750.00
431 Yates E&O Dry Renovati	11/30/2010	11/30/2010	214,711.49			214,711.49	15,387.00	4,294.00		19,681.00
434 Communications Improv	6/30/2011	6/30/2011	89,807.33			89,807.33	17,961.00	5,987.00		23,948.00
435 Power Distribution Impr	6/30/2011	6/30/2011	108,274.04			108,274.04	6,495.00	2,165.00		8,660.00
436 Fiber Optic Network Syst	6/30/2011	6/30/2011	24,228.00			24,228.00	3,633.00	1,211.00		4,844.00
437 Ross Pump System Impr	6/30/2011	6/30/2011	17,311.87			17,311.87	2,076.00	692.00		2,768.00
443 Davis Shotcreting Improv	6/30/2011	7/1/2011	857,538.24			857,538.24	85,755.00	28,585.00		114,340.00
481 Improvements to Yates R	5/1/2012	5/1/2012	42,785.45			42,785.45	1,855.00	856.00		2,711.00
510 Davis Campus Laborator	11/30/2012	11/30/2012	8,453,584.87			8,453,584.87	446,161.00	281,786.00		727,947.00
527 Ross Gas Line	1/14/2013	1/14/2013	15,873.11			15,873.11	952.00	635.00		1,587.00
521 4850 Refuge Area	2/1/2013	2/1/2013	175,941.14			175,941.14	12,462.00	8,797.00		21,259.00
			33,812,540.53	0.00	0.00	33,812,540.53	3,194,356.84	873,000.00	0.00	4,067,356.84

170 - Improvements in Progress

9/2/2015 1:35:16 PM

Year to Date 7/1/2014 through 6/30/2015

Cost of Fixed Assets

000 - SD Science & Technology Authority

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
170 - Improvements in Progress										
477 Improvements in Progress:	6/30/2012	6/30/2012	934,406.24			934,406.24				0.00
529 Improvement in Progress -	6/30/2013	6/30/2013	1,635,423.51			1,635,423.51				0.00
535 Ross Shaft Labor/SCC/EI	6/30/2013	6/30/2013	1,096,843.28			1,096,843.28				0.00
552 RTU HVAC Admin. Bldg	6/30/2014	6/30/2014	9,241.00		(9,241.00)	0.00				0.00
557 Ross Shaft Rehab FY14	6/30/2014	6/30/2014	3,873,268.01			3,873,268.01				0.00
558 Davis Dehumidification	6/30/2014	6/30/2014	529,719.52		(529,719.52)	0.00				0.00
559 Yates Skip Bonnet Work	6/30/2014	6/30/2014	12,044.20		(12,044.20)	0.00				0.00
560 WTP Tank Install (Tank 1	6/30/2014	6/30/2014	474.20		(474.20)	0.00				0.00
561 CASPAR Experiment De	6/30/2014	6/30/2014	30,234.06			30,234.06				0.00
562 CASPAR Facility Develo	6/30/2014	6/30/2014	279,209.33			279,209.33				0.00
563 Ross Rehab FY14 SCC/L	6/30/2014	6/30/2014	1,216,243.78			1,216,243.78				0.00
564 CASPAR Facility Dev FY	6/30/2014	6/30/2014	58,490.80			58,490.80				0.00
604 Ross Shaft Rehab FY201	6/30/2015	6/30/2015		6,331,306.42		6,331,306.42				0.00
605 Sanford Visitor Center	6/30/2015	6/30/2015		4,460,206.48		4,460,206.48				0.00
606 CASPAR/BHSU UG Fac	6/30/2015	6/30/2015		2,356,853.77		2,356,853.77				0.00
607 Yates 2nd Skip Bonnet	6/30/2015	6/30/2015		12,047.98		12,047.98				0.00
608 CASPAR Experiment De	6/30/2015	6/30/2015		668,419.00		668,419.00				0.00
609 Jonas Renovation FY15	6/30/2015	6/30/2015		1,383,790.71		1,383,790.71				0.00
			9,675,597.93	15,212,624.36	(551,478.92)	24,336,743.37	0.00	0.00	0.00	0.00
180 - Infrastructure										
294 Road Gravel WWTP East	7/1/2008	7/1/2008	48,846.60			48,846.60	7,326.17	1,221.00		8,547.17
296 Road Gravel Yates Hillsir	7/1/2008	7/1/2008	5,159.00			5,159.00	773.98	129.00		902.98
298 Sewer Line System	7/1/2008	7/1/2008	14,850.00			14,850.00	3,564.00	594.00		4,158.00
300 Water Line System (Hisc	7/1/2008	7/1/2008	38,150.00			38,150.00	9,156.00	1,526.00		10,682.00
301 Water Line System (Othe	7/1/2008	7/1/2008	25,675.00			25,675.00	6,162.00	1,027.00		7,189.00
292 Concrete Cooling Basins	8/1/2008	8/1/2008	25,000.00			25,000.00	2,958.33	500.00		3,458.33
293 Concrete Vault System	8/1/2008	8/1/2008	25,000.00			25,000.00	2,958.33	500.00		3,458.33
290 Mill Reservoir	10/30/2008	10/30/2008	117,540.85			117,540.85	13,322.21	2,351.00		15,673.21
297 Sewer Line - Backwash t	11/1/2008	11/1/2008	155,156.08			155,156.08	35,167.50	6,206.00		41,373.50
291 Clarifier - WWTP	11/25/2008	11/25/2008	117,245.74			117,245.74	13,092.87	2,345.00		15,437.87
414 Grizzly Gulch Decant Pip	1/1/2011	1/1/2011	1,060,808.89			1,060,808.89	74,256.00	21,216.00		95,472.00
415 Ross Potable Water Line	1/1/2011	1/1/2011	24,810.00			24,810.00	3,472.00	992.00		4,464.00
			1,658,242.16	0.00	0.00	1,658,242.16	172,209.39	38,607.00	0.00	210,816.39
190 - Land										
304 Land - Donated by Home	4/14/2006	4/14/2006	1,511,000.00			1,511,000.00				0.00

Year to Date 7/1/2014 through 6/30/2015

Cost of Fixed Assets

000 - SD Science & Technology Authority

Sys ID Description	Acquire	In Service	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
190 - Land										
305 Land - Closing Costs	1/31/2007	1/31/2007	13,435.39			13,435.39				0.00
306 Land - Phase I Enviromer	6/30/2008	6/30/2008	4,000.00			4,000.00				0.00
307 Land - Phase II Site Asse	12/23/2008	12/23/2008	5,602.65			5,602.65				0.00
603 Ellison Option	6/30/2015	6/30/2015		45,260.00		45,260.00				0.00
			1,534,038.04	45,260.00	0.00	1,579,298.04	0.00	0.00	0.00	0.00
200 - Other Non Dep										
309 Archive Materials - Gold	7/1/2008	7/1/2008	20,000.00			20,000.00				0.00
310 Archive Materials	7/1/2008	7/1/2008	50,000.00			50,000.00				0.00
			70,000.00	0.00	0.00	70,000.00	0.00	0.00	0.00	0.00
210 - Underground										
311 Underground - Closing C	1/31/2007	1/31/2007	90,686.99			90,686.99				0.00
312 Underground	1/31/2007	1/31/2007	10,658,650.00			10,658,650.00				0.00
			10,749,336.99	0.00	0.00	10,749,336.99	0.00	0.00	0.00	0.00
220 - Underground Improvements										
410 Improvements - Undergrc	6/30/2010	6/30/2010	1,210,109.78			1,210,109.78				0.00
444 Improvement Majorana E	10/31/2010	10/31/2010	159,204.14			159,204.14				0.00
446 Improvement Hazard Mit	5/31/2011	5/31/2011	60,774.93			60,774.93				0.00
442 Improvements Davis Exca	6/30/2011	7/1/2011	4,460,860.74			4,460,860.74				0.00
479 Improvement to UG Haze	6/30/2012	6/30/2012	69,223.43			69,223.43				0.00
530 Improvements-Haz.Mit.2	6/30/2013	6/30/2013	51,019.29			51,019.29				0.00
556 Hazard Mitigation Inprov	6/30/2014	6/30/2014	294,893.16			294,893.16				0.00
567 D.Campus Excav./Dehum	7/22/2014	7/22/2014		31,530.99		31,530.99				0.00
602 Hazard Mitigation 2015	6/30/2015	6/30/2015		163,874.47		163,874.47				0.00
			6,306,085.47	195,405.46	0.00	6,501,490.93	0.00	0.00	0.00	0.00

Cost of Fixed Assets

Accumulated Depreciation

Summary

000 - SD Science & Technology Authority	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
110 - Automobiles	79,255.08	16,900.00	(9,850.00)	86,305.08	54,390.10	10,737.00	(8,864.57)	56,262.53
120 - Building	7,223,085.46	0.00	0.00	7,223,085.46	1,315,880.29	145,753.00	0.00	1,461,633.29
130 - Computer Hardware	416,747.54	34,725.00	0.00	451,472.54	382,050.47	10,275.00	0.00	392,325.47
140 - Equipment & Fixtures	9,102,777.42	783,278.38	(65,179.02)	9,820,876.78	2,411,043.95	627,928.00	(29,107.90)	3,009,864.05
150 - Furniture & Fixtures	74,211.50	0.00	0.00	74,211.50	29,280.33	4,990.00	0.00	34,270.33
160 - Improvements	33,812,540.53	0.00	0.00	33,812,540.53	3,194,356.84	873,000.00	0.00	4,067,356.84
170 - Improvements in Progress	9,675,597.93	15,212,624.36	(551,478.92)	24,336,743.37	0.00	0.00	0.00	0.00
180 - Infrastructure	1,658,242.16	0.00	0.00	1,658,242.16	172,209.39	38,607.00	0.00	210,816.39
190 - Land	1,534,038.04	45,260.00	0.00	1,579,298.04	0.00	0.00	0.00	0.00
200 - Other Non Dep	70,000.00	0.00	0.00	70,000.00	0.00	0.00	0.00	0.00
210 - Underground	10,749,336.99	0.00	0.00	10,749,336.99	0.00	0.00	0.00	0.00
220 - Underground Improvements	6,306,085.47	195,405.46	0.00	6,501,490.93	0.00	0.00	0.00	0.00
	80,701,918.12	16,288,193.20	(626,507.94)	96,363,603.38	7,559,211.37	1,711,290.00	(37,972.47)	9,232,528.90

Cost of Fixed Assets

Accumulated Depreciation

Combined	Beginning	Additions	Retired	Ending	Beginning	YTD 6/30/2015	Retired	Ending
110 - Automobiles	79,255.08	16,900.00	(9,850.00)	86,305.08	54,390.10	10,737.00	(8,864.57)	56,262.53
120 - Building	7,223,085.46	0.00	0.00	7,223,085.46	1,315,880.29	145,753.00	0.00	1,461,633.29
130 - Computer Hardware	416,747.54	34,725.00	0.00	451,472.54	382,050.47	10,275.00	0.00	392,325.47
140 - Equipment & Fixtures	9,102,777.42	783,278.38	(65,179.02)	9,820,876.78	2,411,043.95	627,928.00	(29,107.90)	3,009,864.05
150 - Furniture & Fixtures	74,211.50	0.00	0.00	74,211.50	29,280.33	4,990.00	0.00	34,270.33
160 - Improvements	33,812,540.53	0.00	0.00	33,812,540.53	3,194,356.84	873,000.00	0.00	4,067,356.84
170 - Improvements in Progress	9,675,597.93	15,212,624.36	(551,478.92)	24,336,743.37	0.00	0.00	0.00	0.00
180 - Infrastructure	1,658,242.16	0.00	0.00	1,658,242.16	172,209.39	38,607.00	0.00	210,816.39
190 - Land	1,534,038.04	45,260.00	0.00	1,579,298.04	0.00	0.00	0.00	0.00
200 - Other Non Dep	70,000.00	0.00	0.00	70,000.00	0.00	0.00	0.00	0.00
210 - Underground	10,749,336.99	0.00	0.00	10,749,336.99	0.00	0.00	0.00	0.00
220 - Underground Improvements	6,306,085.47	195,405.46	0.00	6,501,490.93	0.00	0.00	0.00	0.00
	80,701,918.12	16,288,193.20	(626,507.94)	96,363,603.38	7,559,211.37	1,711,290.00	(37,972.47)	9,232,528.90

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Not Fixed Assets \$87,131,074.48 ✓

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SD Science and Technology Authority
Consolidated Report 6/30/15
Inventory of Supplies

Inventory of Supplies	Balance 6/30/2012	Additions 2013	Deletions 2013	Balance 6/30/2013	Additions 2014	Deletions 2014	Balance 6/30/2014	Additions 2015	Deletions 2015	Balance 6/30/2015
Foundry Motors/Tuggers/Switches/Skips	\$ 779,000.00		\$ 13,000.00	\$ 779,000.00			\$ 779,000.00		\$ 18,000.00	\$ 779,000.00
Transformers in Foundry	\$ 125,346.30			\$ 112,346.30			\$ 112,346.30			\$ 94,346.30
Transformers in Machine Shop	\$ 114,650.00			\$ 114,650.00			\$ 114,650.00			\$ 114,650.00
(from 6Winze) 6800/8000 Pump/Motor Spares	\$ 23,975.00			\$ 23,975.00			\$ 23,975.00			\$ 23,975.00
Ropes	\$ 15,900.00			\$ 15,900.00			\$ 15,900.00		\$ 6,057.14	\$ 9,842.86
Transformers Refurbished (Machine Shop)	\$ 17,400.00			\$ 17,400.00			\$ 17,400.00			\$ 17,400.00
Shaft Level Pumps (from Homestake)	\$ 283,536.36			\$ 283,536.36			\$ 283,536.36			\$ 283,536.36
Benshaw Softstart Starters (3)	\$ 105,772.27			\$ 105,772.27			\$ 105,772.27			\$ 105,772.27
Used Joy Fans (2)	\$ 13,372.00			\$ 13,372.00			\$ 13,372.00			\$ 13,372.00
S&C Metal Enclosed Switchgear (1 set of 3)	\$ -			\$ -			\$ -			\$ -
S&C Wall Mounted Metal Enclosed Fuse Mounting	\$ -			\$ -			\$ -			\$ -
Ross Maint. Transformer S#1M0179357	\$ -			\$ -			\$ -			\$ -
Baldor Motor (5000L Spare) S#S9069457-001 001	\$ 6,240.00			\$ 6,240.00			\$ 6,240.00			\$ 6,240.00
S&C Metal Enclosed Switchgear (5 Units)	\$ -			\$ -			\$ -			\$ -
S&C PGM II Multilin Meter for above in Bay 3	\$ -			\$ -			\$ -			\$ -
Flow Pump (Yates Sump Spare) S#1070147	\$ 22,870.00			\$ 22,870.00			\$ 22,870.00			\$ 22,870.00
S&C Skipper Air Powered Dbl Diaph. Pump S#1905122	\$ 5,328.06			\$ 5,328.06			\$ 5,328.06			\$ 5,328.06
Cable from Improvements Progress	\$ 354,853.92			\$ 354,853.92		\$ 126,715.43	\$ 354,853.92			\$ 354,853.92
Tsurumi Pumps	\$ 480,559.72		\$ 283,330.50	\$ 197,229.22			\$ 70,513.79			\$ 70,513.79
Redge Chambers (2)	\$ 143,369.48			\$ 143,369.48			\$ 143,369.48			\$ 143,369.48
1000KVA Transformer S# 161916B	\$ 10,000.00			\$ 10,000.00			\$ 10,000.00			\$ 10,000.00
Termination Cabinets (4) for Ross Pump System	\$ 15,914.48			\$ 15,914.48			\$ 15,914.48			\$ 15,914.48
#5 Shaft Axial Flow Mine Fan S# 3533	\$ 47,245.51			\$ 47,245.51			\$ 47,245.51			\$ 47,245.51
DAD Pump S#882157	\$ 140,191.41			\$ 140,191.41			\$ 140,191.41			\$ 140,191.41
DAD Pump S#882158	\$ 131,559.36			\$ 131,559.36			\$ 131,559.36			\$ 131,559.36
(2) Siemens Motors Malloy (for 2 X 11 DAD Pumps)	\$ 94,011.92			\$ 94,011.92			\$ 94,011.92			\$ 94,011.92
Sky Climber Electric 208V Hoist	\$ 5,880.13			\$ 5,880.13			\$ 5,880.13			\$ 5,880.13
AC Generator 1974 Kato S#73392	\$ 40,036.00			\$ 40,036.00			\$ 40,036.00			\$ 40,036.00
Delta Optical Comparator	\$ 21,783.37			\$ 21,783.37			\$ 21,783.37			\$ 21,783.37
200 - 10Ft. Lengths 20" Diameter Piping (Waterinflow)								\$ 65,300.00		\$ 65,300.00
Totals	\$ 2,931,095.79	\$ 67,699.50	\$ 296,330.50	\$ 2,702,464.79	0	\$ 126,715.43	\$ 2,575,749.36	\$ 65,300.00	\$ 24,057.14	\$ 2,616,992.22

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**PROPERTY MANAGEMENT SYSTEM ASSESSMENT
PROPERTY REPORT CERTIFICATE
PROPERTY REPORT**

Date: March 4, 2015

Subcontract Number: 6994297

Subcontractor Property Identification Number	Qty	Property Description, Manufacturer Name, Agreement No.	DOE/LBNL Property Number	Serial Number	Model Number	Location	Acquisition Date	Condition Code	Grams	Unit Cost	Total Cost
1	1	Fluke Three Phase Quality Analyzer Meter [PO #3019]	6761832	12990014	435	SDSTA/Ross Hoist Elec Tool Strg Rm	2012-03	1	n/a	\$ 5,895.00	\$ 5,895.00
2	1	Flygt Submersible Power Cable (150' @\$ 38.82/ft.) [PO #2929]	Orange Tag	none	FLY94-21-11	SDSTA/Yates Shaft 4850L	2012-02	1	n/a	\$ 5,823.00	\$ 5,823.00
3	1	Allen Bradley Flex Solid State Con-troller [PO #2860]	6761818	none	2752991	SDSTA/Yates Shaft 4850L	2012-01	1	n/a	\$ 5,375.00	\$ 5,375.00
4	1	Dell Equal Logic SAN [PO #2959]	6761825	50DMKS1	PS4100XI SCSI	SDSTA Admin Bldg Server Room	2012-03	1	n/a	\$ 38,950.00	\$ 38,950.00
5	1	Thern Ceiling Mount Winch [PO #2896]	Orange Tag	4012-64281	4WS6M12	SDSTA 4850L Yates Station	2012-05	1	n/a	\$ 6,360.00	\$ 6,360.00
5	1	Thern Single Speed Control [PO #2896]	Orange Tag	none	10S7E4	SDSTA 4850L Yates Station	2012-05	1	n/a	\$ 1,055.00	\$ 1,055.00
6	1	Corning 96 Count Figure 8 Fiber Optic Cable (5000'@ \$1.93/ft) [PO #3163]	Orange Tag	none	096-EUA-T4101D20	SDSTA/Yates Shaft	2012-06	1	n/a	\$ 9,650.00	\$ 9,650.00
7	1	Commercial Evolu-tion Series 8 "Pivot Gate" [PO #3524]	Orange Tag	ES810-01007	CGC-ES810	SDSTA/Ross	2012-10	1	n/a	\$ 15,489.50	\$ 15,489.50
8	1	Flygt Submersible Pump with Agitator 50' Cable (No Control) [PO #3699]	Orange Tag	1280005	5100.251A	SDSTA/Ross Shaft 5000L	2013-01	1	n/a	\$ 20,500.00	\$ 20,500.00
9	1	R&M 5-ton Electric Chain Hoist [PO #4043]	Orange Tag	10026149	LM25-5-015LM12T2C1	SDSTA 4850L Governor's Corner	2013-05	1	n/a	\$ 5,133.00	\$ 5,133.00
10	1	Vigilant VM Panel (REMIKA mic & mounting box, Ethernet & NOC Cards, VM Control switches, Duct Detector, 2-RLCD-C Annunciators) [PO #13064]	6774245	none	Vigilant VM-RCM/D (Part #260512)	4850L Davis Campus Fire Alarm System	2013-06	1	n/a	\$ 18,333.70	\$ 18,333.70
11	1	Trojan Locomotive Battery Charger [PO #4136]	Orange Tag	32951	MPL40F600MI	4850L Yates Station	2013-07	1	n/a	\$ 5,689.00	\$ 5,689.00

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12	1	Fujikura 70S Fusion Splicer w/Cleaver & Battery Drop (PO #4252)	6774177	VG239CX06DPEN4CZ	Stock #AFL FSM-70S/S015591	Ross Hoist Cyber Tool Room	2013-07	1	n/a	\$ 15,752.93	\$ 15,752.93
13	1	Baldor 400 hp, 547 amp Power Module (PO #4321)	Orange Tag	550210008EF	VSIPE4400-9L	5 Shaft	2013-08	1	n/a	\$8,800.00	\$8,800.00
14	1	Flygt Submersible Pump Model 2670 (PO #4310)	6774160	13500012	Model 2670	2600' Yates Pump Station	2013-08	1	n/a	\$12,556.00	\$12,556.00
15	1	Sullair 185 Portable Air Compressor 2013 SU 185DLQ (PO 4206)	6774153	Air Compressor SN 201308070067 John Deere Engine SN PE4024R129152	Model 49HP/185/B DLQ/JD14 EPA	UG Hazard Mitigation	2013-08	1	n/a	\$13,507.00	\$13,507.00
16	1	Fluke OptiFiber Pro OTDR Fiber Testing Tool (PO #4302)	6777741	2298662	Factory Build to Order	Ross Hoist Cyber Tool Room	2013-08	1	n/a	\$13,178.88	\$13,178.88
17	1	Cornell 6H-F16 Frame Mounted Pump/Motor Assembly (PO 58163)	UG-no tag (see 11.7.2013 email)	Pump/Motor Assembly SN 187888; 100 HP Motor SN A1309122094	6H-F16	SOSTA/YRoss Shaft 2600L	2013-10	1	n/a	\$20,823.75	\$20,823.75
18	1	Cornell 6H-F16K Spare Pump (PO 58163)	Orange Tag	Pump End only SN 187892	6H-F16K	Warehouse (until needed)	2013-10	1	n/a	\$6,867.90	\$6,867.90
19	1	Maestro Vigilante AQS Air Quality Station (PO 4326)	Orange Tag	none	VAQS-PF-PF-G002-NR-NR-NR-NR-MB-IM-SP1-SP2-SP3	Oro Hondo Fan	2013-11	1	n/a	\$7,175.00	\$7,175.00
20	1	Wheelift Transporter Model (Auto Guided Daya Bay vehicle - Mod 20)	DOE# 6690569 (GFP)	none	Model CS280	Yates Crusher Room	2014-01	4	n/a	\$919,808.00	\$919,808.00
21	1	Movex Twin Track 66 Track-O-lift, stair climber, remote, sides/backrest (PO 4739)	6777727	Serial Number 14011421CA045236-2	Twin-Track 66	4850L Yates Shaft Davis Campus	2014-02	1	n/a	\$ 25,455.00	\$25,455.00
22	2	Titan Air Make-Up Units Natural Gas, 50,000 CFM, 3,620,000 BTU (PO 4613]	#1 - 6777703 #2 - 6777710	Unit #1 - SN 15028 Unit #2 - SN 15029	Unit #1 - Model TA-133 NG HLH DA Unit #2 - Model TA-133 NG HRH DA	#1 - Ross Shaft #2 - Yates Shaft	2014-02	1	n/a	\$ 31,215.00	\$ 62,430.00
23	1	CAF-960-5 Blow-Through/Wall Supply-Air Package Fan (PO 4833)	Orange Tag	Serial Number E3792	Model CAF-960-5 Filtered Supply Fan	Temporary Clean Room - Ross 4850L	2014-03	1	n/a	\$ 6,995.00	\$ 6,995.00
24	1	Big Blue 300 Pro Kubota CC/CV (1800 RPM) Welder (PO 4981)	6777659	Serial Number ME160009E	MIL907521	Hazard Mitigation Crew 4850L	2014-05	1	n/a	\$ 10,445.00	\$ 10,445.00
25	1	Olympus 1000i Digital Ultrasonic Flaw Detector (PO 5199)	6783087 - Withdrawn 7-10-2014	Serial Number-140220804	EOCH-1000i	4850L	2014-06	1	n/a	\$ 11,715.00	\$ 11,715.00

26	2	Warren Battery mtd in Std Trojan Battery Box (PO 5495)	Orange Tags	Batteries: SN 73362 & 73363	36C 72V 510AH	UG locations	2014-10	1	n/a	\$ 9,583.00	\$ 19,166.00
27	1	Bobcat SB200 Snowblower X 78 attachment (PO 5836)	Orange Tag	713004771	SB200	Surface - WWTP	2015-02	1	n/a	\$ 6,133.00	\$ 6,133.00
28	1	Benson Medical CCA- 200mini Plus System Audiometer	TBD	68205	CCA-200mini (Item #500303-13)	E&O Bldg.	2015-04	1	n/a	\$ 5,990.00	\$ 5,990.00

\$ 1,293,336.66

CONDITION CODES		
For the purpose of indicating Condition of Property, please use the following codes:		
Condition Code	Brief Description	Expanded Definition
1	Excellent	Property which is in new condition or unused condition and can be used immediately without modifications or repairs.
4	Usable	Property which shows some wear, but can be used without significant repair.
7	Repairable	Property which is unusable in its current condition but can be economically repaired.
X	Salvage	Property which has value in excess of its basic material content but repair or rehabilitation is impractical and/or uneconomical.
S	Scrap	Property which has no value except for its basic material content.

At the close of an agreement, ALL Government Furnished Property (GFP) and Subcontractor Acquired Property (SAP) including materials must be accounted for regardless of the value of the property.

Residual Materials: Remaining property that may be incorporated into or attached to a property item. It includes, but is not limited to precious metals, raw or processed materials, parts, components, assemblies or supplies

Financial Report Continuation – Mr. Mike Headley

6D. Attached is the Fiscal Year 2014-2015 Per Diems Report.

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PER DIEM PAYMENTS MADE TO BOARD MEMBERS IN FY 2015

<u>Date</u>	<u>Name</u>	<u>Purpose</u>	<u>Amount</u>
07/18/14	Casey Peterson	Teleconference with Mike Headley	\$75.00
09/12/14	Pat Lebrun	Audit Committee teleconference	\$75.00
09/12/14	Paul Christen	Audit Committee teleconference	\$75.00
09/26/14	Tom Adam	SDSTA Board Meeting (joined by telephone)	\$75.00
09/26/14	Paul Christen	SDSTA Board Meeting	\$75.00
09/26/14	Dana Dykhous	SDSTA Board Meeting	\$75.00
09/26/14	Pat Lebrun	SDSTA Board Meeting (joined by telephone)	\$75.00
09/26/14	Casey Peterson	SDSTA Board Meeting (joined by telephone)	\$75.00
10/10/14	Casey Peterson	Attended LBNE-LBNO Geotechnical Review	\$75.00
11/07/14	Casey Peterson	Visitor Center Content Meeting (joined telephonically)	\$75.00
11/21/14	Pat Lebrun	Audit Committee Meeting, telephonic	\$75.00
11/21/14	Paul Christen	Audit Committee Meeting, telephonic	\$75.00
12/19/14	Dr. Ani Aprahamian	SDSTA Board Meeting (joined by telephone)	\$75.00
12/19/14	Paul Christen	SDSTA Board Meeting	\$75.00
12/19/14	Pat Lebrun	SDSTA Board Meeting	\$75.00
12/19/14	Dana Dykhous	SDSTA Board Meeting (joined by telephone)	\$75.00
12/19/14	Casey Peterson	SDSTA Board Meeting	\$75.00
01/30/15	Casey Peterson	Misc discussions with ED during the month of Jan	\$75.00
02/27/15	Pat Lebrun	REACH Meeting	\$75.00
03/27/15	Paul Christen	SDSTA Board Meeting (joined by telephone)	\$75.00
03/27/15	Pat Lebrun	SDSTA Board Meeting (joined by telephone)	\$75.00
03/27/15	Casey Peterson	SDSTA Board Meeting	\$75.00
04/10/15	Casey Peterson	Strategic Planning interview	\$75.00
05/08/15	Dr. Ani Aprahamian	Strategic Planning interview	\$75.00
05/08/15	Paul Christen	Strategic Planning interview	\$75.00
05/08/15	Pat Lebrun	Strategic Planning interview	\$75.00
05/22/15	Paul Christen	Telephonic Board Meeting, Audit Committee Meeting	\$150.00
05/22/15	Dana Dykhous	Telephonic Board Meeting	\$75.00
05/22/15	Pat Lebrun	Telephonic Board Mtg, Reception for UG Science Conference	\$300.00
		Audit Committee Meeting, Strategic Planning Workshop	
05/22/15	Casey Peterson	Reception for UG Science Conference, Strategic Planning Workshop	\$150.00
06/05/15	Dr. Ani Aprahamian	Nominating Committee Meeting	\$75.00
06/05/15	Dana Dykhous	Nominating Committee Meeting	\$75.00
06/19/15	Pat Lebrun	REACH Committee Meeting	\$150.00
06/30/15	Dr. Ani Aprahamian	SDSTA Board Meeting	\$150.00
06/30/15	Paul Christen	SDSTA Board Meeting	\$150.00
06/30/15	Dana Dykhous	SDSTA Board Meeting	\$150.00
06/30/15	Pat Lebrun	SDSTA Board Meeting	\$75.00
06/30/15	Casey Peterson	SDSTA Board Meeting	\$75.00

Total \$3,525.00

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PER DIEM PAYMENTS MADE TO BOARD MEMBERS IN FY 2015

<u>Date</u>	<u>Name</u>	<u>Purpose</u>	<u>Amount</u>
<u>TOM ADAM</u>			
09/18/14	Tom Adam	SDSTA Board Meeting (joined by telephone)	\$75.00
Adam Total			\$75.00
<u>Dr. Ani Aprahamian</u>			
12/18/14	Dr. Ani Aprahamian	SDSTA Board Meeting (joined by telephone)	\$75.00
05/01/15	Dr. Ani Aprahamian	Strategic Planning interview	\$75.00
06/01/15	Dr. Ani Aprahamian	Nominating Committee Meeting	\$75.00
06/30/15	Dr. Ani Aprahamian	SDSTA Board Meeting	\$150.00
Aprahamian Total			\$375.00
<u>Paul Christen</u>			
09/05/14	Paul Christen	Audit Committee teleconference	\$75.00
09/18/14	Paul Christen	SDSTA Board Meeting	\$75.00
11/13/14	Paul Christen	Audit Committee Meeting, telephonic	\$75.00
12/18/14	Paul Christen	SDSTA Board Meeting	\$75.00
03/20/15	Paul Christen	SDSTA Board Meeting (joined by telephone)	\$75.00
04/29/15	Paul Christen	Strategic Planning interview	\$75.00
05/11/15	Paul Christen	Telephonic Board Meeting	\$75.00
05/18/15	Paul Christen	Audit Committee Meeting	\$75.00
06/30/15	Paul Christen	SDSTA Board Meeting	\$150.00
Christen Total			\$750.00
<u>DANA DYKHOUSE</u>			
09/18/14	Dana Dykhous	SDSTA Board Meeting	\$75.00
12/18/14	Dana Dykhous	SDSTA Board Meeting (joined by telephone)	\$75.00
05/11/15	Dana Dykhous	Telephonic Board Meeting	\$75.00
06/01/15	Dana Dykhous	Nominating Committee Meeting	\$75.00
06/30/15	Dana Dykhous	SDSTA Board Meeting	\$150.00
Dykhous Total			\$450.00
<u>PAT LEBRUN</u>			
09/05/14	Pat Lebrun	Audit Committee teleconference	\$75.00
09/18/14	Pat Lebrun	SDSTA Board Meeting (joined by telephone)	\$75.00
11/13/14	Pat Lebrun	Audit Committee Meeting, telephonic	\$75.00
12/18/14	Pat Lebrun	SDSTA Board Meeting	\$75.00
02/03/15	Pat Lebrun	REACH Meeting	\$75.00
03/20/15	Pat Lebrun	SDSTA Board Meeting (joined by telephone)	\$75.00
04/30/15	Pat Lebrun	Strategic Planning interview	\$75.00
05/11/15	Pat Lebrun	Telephonic Board Meeting	\$75.00
05/17/15	Pat Lebrun	Reception for UG Science Conference	\$75.00

PER DIEM PAYMENTS MADE TO BOARD MEMBERS IN FY 2015

<u>Date</u>	<u>Name</u>	<u>Purpose</u>	<u>Amount</u>
05/18/15	Pat Lebrun	Audit Committee Meeting	\$75.00
05/21/15	Pat Lebrun	Strategic Planning Workshop	\$75.00
06/11/15	Pat Lebrun	REACH Committee Meeting	\$75.00
06/12/15	Pat Lebrun	REACH Committee Meeting	\$75.00
06/30/15	Pat Lebrun	SDSTA Board Meeting	\$75.00
Lebrun Total			\$1,050.00

CASEY PETERSON

07/18/14	Casey Peterson	Teleconference with Mike Headley	\$75.00
09/18/14	Casey Peterson	SDSTA Board Meeting (joined by telephone)	\$75.00
10/08/14	Casey Peterson	Attended LBNE-LBNO Geotechnical Review	\$75.00
10/30/14	Casey Peterson	Visitor Center Content Meeting (joined telephonically)	\$75.00
12/18/14	Casey Peterson	SDSTA Board Meeting	\$75.00
01/30/15	Casey Peterson	Misc discussions with ED during the month of January	\$75.00
03/20/15	Casey Peterson	SDSTA Board Meeting	\$75.00
04/10/15	Casey Peterson	Strategic Planning interview	\$75.00
05/17/15	Casey Peterson	Reception for UG Science Conference	\$75.00
05/21/15	Casey Peterson	Strategic Planning Workshop	\$75.00
06/30/15	Casey Peterson	SDSTA Board Meeting	\$75.00
Peterson Total			\$825.00

Financial Report Continuation – Mr. Mike Headley

6E. Attached is a copy of the signed State of South Dakota Captive Grant Agreement.

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STATE OF SOUTH DAKOTA
BUREAU OF ADMINISTRATION

GRANT AGREEMENT

THIS AGREEMENT is made and entered into effective the date of the last signature hereon by and between the State of South Dakota, acting through its Bureau of Administration, 500 E. Capitol Avenue, Pierre, South Dakota, 57501 ("BOA" and the South Dakota Authority Captive Insurance Company, LLC, 1429 E. Sioux Avenue, Pierre, South Dakota, 57501 ("the Company").

RECITALS

A. On March 13, 2015, Governor Dugaard signed into law 2015 House Bill 1187 ("HB 1187"), which provided for an appropriation of \$2,000,000.00 to BOA for the purposes of a grant to the Company to capitalize the company and pay expenses associated with providing liability coverage for the Company's members (the "Grant").

B. On August 12, 2015, the South Dakota Division of Insurance issued the necessary authorizations for the Company to begin providing insurance coverage to its members.

C. On August 12, 2015, the South Dakota Secretary of State issued a certificate of organization for the Company.

D. The parties desire to provide for the transfer of the Grant funds and to establish the conditions for the use of the Grant by the Authority.

AGREEMENT

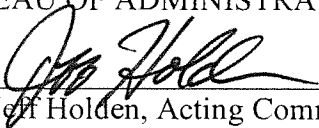
For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties AGREE as follows:

1. The amount of the Grant is \$2,000,000.00.
2. Possession, control and administration of the Grant are hereby transferred to the Company, subject however to the Grant funds remaining within the liability captive insurance company fund created pursuant to HB 1187 and to the other applicable provisions of HB 1187.
3. The Company agrees to use the Grant solely for the purposes authorized in HB 1187 and for no other purposes. In the event the Grant or any part thereof is expended for unauthorized purposes, the Company shall promptly repay any such amount to BOA. In the event the Company ceases business or dissolves its existence, any part of the Grant then remaining, less the reasonable and necessary expenses of winding up the Company's affairs, and less any amounts required to be maintained on account of claims or potential claims or otherwise required by the South Dakota Division of Insurance or any successor regulatory entity shall be paid over to BOA. Upon a final determination by a regulatory body with jurisdiction that no further claims reserves are required to be held, any remaining balance of the Grant shall be paid over to BOA. The repayment provisions of this paragraph 3 shall survive performance of this Agreement by BOA and shall survive termination of this Agreement for any reason.

4. The Company shall from time to time as reasonably required by BOA provide such written or oral reports on its business and affairs as BOA may request; provided, however, that the Company shall not be required to disclose information concerning specific claims, defense strategies, strategies concerning negotiations with reinsurers, attorney-client privileged information or other, similar information which a captive insurer providing coverage to a commercial venture would normally consider to be confidential. The reporting requirements of this paragraph 4 shall survive performance of this Agreement by BOA and shall survive termination of this Agreement for any reason.

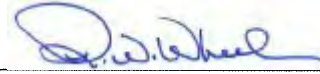
5. Except for the repayment provisions of paragraph 3 above and the reporting requirements of paragraph 4 above, which shall survive, this Agreement shall be deemed fully-executed and completed upon the transfer of the Grant to the Company.

STATE OF SOUTH DAKOTA
BUREAU OF ADMINISTRATION

BY: 
Jeff Holden, Acting Commissioner

DATE: 8-19-15

SOUTH DAKOTA AUTHORITY
CAPTIVE INSURANCE COMPANY, LLC

BY: 
Ron Wheeler, President

DATE: 8-20-2015

Executive Director's Report – Mr. Mike Headley

The Executive Director's Report includes the following:

- 7A. SDSTA August Monthly Report (attached)
- 7B. E&O Curriculum Development (10 min presentation followed by 5 min Q/A)
- 7C. Sanford Lab Homestake Visitor Center Update (10 min presentation followed by 5 min Q/A)
- 7D. Declarations of Surplus

Recommended Action:

Motion to accept the Executive Director's Report as presented.

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South Dakota Science and Technology Authority
Monthly Report
August 2015

Mike Headley, Laboratory Director
Executive Summary

Science

CASPAR and BHSU Underground Campus Facilities Completed

Construction was completed on the facility space for the Compact Accelerator System for Performing Astrophysical Research (CASPAR) experiment and the Black Hills State University (BHSU) Underground Campus (BHUC). Two shipments of accelerator equipment from Notre Dame were completed in July and August and the CASPAR team was given an authorization for initial installation at the 4850L Ross Campus. By the end of the month, all of the accelerator equipment had been transported underground and many of the main beamline magnets had been placed in the accelerator hall.

For the BHUC, authorization for initial installation activities was issued in early September. The first main activity is the installation of vacuum-jacketed piping for the liquid nitrogen distribution system.

Large Underground Xenon – LUX

LUX continues to be in a stable data-taking mode and has accumulated more than 190 live days with a goal of reaching 300 live days. Xenon purity dipped slightly as a result of brief power outages that affected circulation. Xenon purity is more than sufficient for high-quality data taking operations. The end of data-taking continues to be projected as mid-2016. As detector operations remain stable and as SDSTA personnel increase their level of direct support for regular tasks, the number of scheduled LUX hours continues to be modest. In August, the average LUX crew consisted of five people for a combined total of 300 hours.

MAJORANA DEMONSTRATOR – MJD

Dr. Alana Opper, a nuclear physics program manager from the National Science Foundation (NSF), visited Sanford Lab to tour both the MJD and CASPAR experiments on the 4850L and have discussions with staff.

Acceptance testing of the final enriched germanium detectors was completed in August, after which the five detectors were removed from the vendor-supplied cryostats for further tests. Further tests were conducted on germanium detectors involved in a previous incident with the glovebox lift, and it was determined that two detectors will need to be returned to the vendor.

Background and calibration data continue to be collected with Module 1 inside the main shield. In August, there was good progress on the inner copper shield needed to complete the main shield. Half of the plates have been completed so far, and machining for the remaining plates will complete in early September. There was progress on detector string assembly for Module 2, and by the end of the month a second detector string had been assembled and was undergoing tests. The goal is to have Module 2 in the shield by the end of 2015. MJD averaged more than 10 people working underground in August (1834 hours).

Ross Shaft Rehabilitation

The Ross Crew refurbished 72 feet of shaft length in August and has installed 3,086.6 feet of new shaft steel overall. Four new steel sets were installed (181 – 184). The 6-month required non-destructive testing on all hoist ropes supporting the Ross conveyances were performed successfully. Design and shop drawings have been updated to address minor steel fabrication modifications for installation of steel within the Ross pillar. TrueNorth Steel will take possession of the next phase (sets 185 – 245) of raw steel early in September. The Ross Crew is expected to resume steel work during the week of September 14.

Yates Shaft

Top Down Maintenance (TDM) addressed 128 separate panels/pieces in the shaft. TDM in the skip compartment was conducted between sets 453 and 468 and has reached the brow of the 3050L where the station will be rehabilitated. Fabrication of a heavy duty north skip bonnet was completed and it was delivered in early September. Crews transported 215 loads of material underground to support science and construction efforts.

South Dakota Science and Technology Authority

Monthly Report

August 2015

Facility Infrastructure

At the end of August, the underground water level was at 5,712 feet; a drop of 35 feet. Water inflows above the 3650L are averaging 325 gallons per minute. Crews continued work on the installation of a six-inch waterline from the Yates to the Ross Campus across the 4850 Level to provide industrial water for fire suppression systems.

Engineering

For the Long-Baseline Neutrino Facility (LBNF)/Deep Underground Neutrino Experiment (DUNE), 100% facility preliminary designs were completed in August, and cost and schedule estimates are expected in September. The Critical Decision 3A (CD-3A) review has been scheduled, with a Director's review October 27-29 and the DOE review December 2-4. Both reviews are planned to be held at Sanford Lab in Lead, SD.

The Engineering team continues to support the LBNF Environmental Assessment (EA) process for National Environmental Policy Act NEPA. The comment period concluded July 10. Draft responses to the comments are under review. No new or unexpected comments were received. A Finding of No Significant Impact (FONSI) conclusion is expected.

The Davis Memorial ring sculpture was completed and installed in early August and a dedication held August 26.

Environment, Health and Safety

The SDSTA had zero recordable injuries again in August and now eleven months total with no recordable injuries. The EHS Team reviewed Job Hazard Analyses (JHAs) for Compact Accelerator System Performing Astrophysical Research (CASPAR) experiment equipment deployment and JHAs for Black Hills Underground Campus liquid nitrogen piping installation and pressure tests.

Communications / Education and Outreach / Cultural

The Cultural Advisory Committee met on August 31. Several presentations were made by SDSTA staff to the committee. The committee also reviewed progress towards fulfilling the recommendations of the last annual review in February 2015, discussed changes in the charter to meet the responsibilities of the LBNF/DUNE Programmatic Agreement, and toured the new Sanford Lab Homestake Visitor Center.

The Black Hills State University (BHSU) Bridge program provides a week of orientation for American Indian students transitioning into college at BHSU. Education staff gave an introduction to Sanford Lab and an overview of student opportunities. The next day 19 of the students toured the Yates Hoistroom and the Visitor Center.

The E&O Department is nearing the completion of six curriculum units that are aligned with the new South Dakota Science Standards and that feature the science of Sanford Lab. Two units have been developed for each of three grade bands, and each unit encompasses 7-10 days of classroom instruction. In 2015-2016, Sanford Lab E&O staff will directly support teachers across the state whom wish to pilot one of the units.

The E&O team also is offering school visits that include 20 to 40-minute presentations in an assembly or classroom format. These will be short, engaging experiences designed to stimulate interest in Science, Technology, Engineering, and Math (STEM) fields and the exciting science happening at Sanford Lab. Topics will change annually. Also, a limited number of field trips will be offered for schools to travel to Sanford Lab. Program offerings are grade-band appropriate and aligned with South Dakota science standards. A new website is now open for schools to apply.

Finance and Contracts

For Sanford-funded work, the SDSTA finished August \$6,809 under budget and is \$24,010 under budget for the SD state fiscal year. For DOE-funded operations, the SDSTA finished July \$173,632 under budget and is over budget \$251,221 for federal FY2015. Six million dollars total over a three year period has been secured from the Governor's Office of Economic Development (GOED) to fund LUX-ZEPLIN (LZ) experiment facility improvements and xenon purchases. Two million dollars in a private loan has been committed to purchase xenon. Loan documents are in work.

Underground Access Department

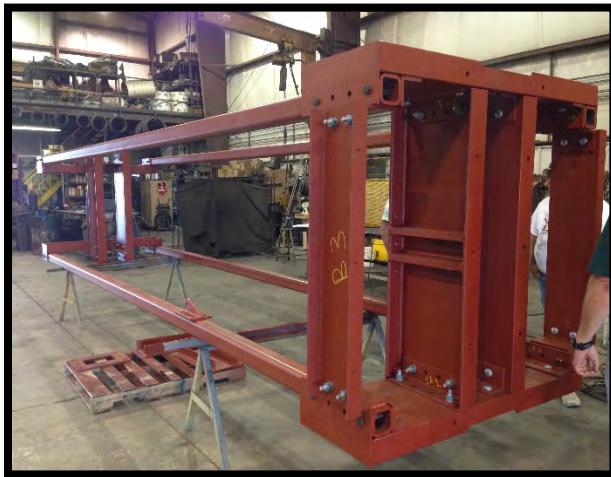
William McElroy, Director of Underground Access

Ross Shaft

The Ross Crew refurbished 72 feet of shaft length in August and has installed 3,086.6 feet of new shaft steel overall. Steel installation was comprised of four new steel sets (181E-184B). The 6-month required non-destructive testing on all hoist ropes supporting the Ross conveyances were performed successfully. Design and shop drawings have been updated to address minor steel fabrication modifications for installation of steel within the Ross pillar. TrueNorth Steel will take possession of the next phase (sets 185CD – 245B) of raw steel early in September. The Ross Crew is expected to resume steel work during the week of September 14. The shaft received delivery of the IVAC500 vacuum system on a rental basis for cleaning the Ross sump below the 5000L. The IVAC system is a venturi style vacuum pump that will suck the fine material from the sump and discharge the material into a containment area over 200 feet away. Initial tests of this system have been positive.

Yates Shaft

Top Down Maintenance (TDM) addressed 128 separate panels/pieces of the shaft within August. Top Down Maintenance in the skip compartment was conducted between sets 453 and 468 and has reached the brow of the 3050L where the station will be rehabilitated. Fabrication of a heavy duty north skip bonnet is complete and is scheduled for delivery in early September. Crews transported a 215 loads of material underground to support science and construction efforts. The demobilization of the contractor responsible for building out the Compact Accelerator System for Performing Astrophysical Research (CASPAR)/Black Hills State University Underground Campus (BHUC) lab space has been completed



YATES: Fabricating North Skip Bonnet



ROSS: Installing 2900L Station Gates

PROJECT DETAILS (AUG FY16)		SDSTA CAPEX BUDGET SUMMARY		
Title	Director	Budget	Expenses	% Spent
Underground Access Dept.	McElroy	\$ 2,508,976	\$ 863,868	34%
<p>Legend: Mo. Budget (Red Bar), Mo. Actuals (Purple Bar), ACTUALS CUM (Green Line), BUDGET CUM (Blue Line)</p>				
FINANCIAL STATUS				
Non-labor dollars spent on furnishings needed to get project through Dec 2015				G
Spent 50% of monthly budget for steel fab due to delay in engineering mods				G
PLANNED ACTIVITIES NEXT PERIOD				
ROSS				
Clean Ross sump using IVAC500 system. Goal of 20' of freeboard below 5000L sill				
Resume steel installation through set 187B				
YATES				
Complete Top Down Maintenance effort in skip compartment to set 480, rehab 3050L station				
Install heavy duty north skip bonnet				
MAJOR MILESTONES				
Ross - Complete project to 3200L			Q1 of 2016	G
Yates - Reach 3350 with Top Down Maintenance -skip side			Q1 of 2016	G
Ross - Complete project to 3500L			Q2 of 2016	G

Facility Infrastructure Department
Tim Baumgartner, Director of Facility Infrastructure

Summary

Facility Infrastructure effort in August was directed to the following areas: facility maintenance, equipment repair, preventative maintenance, electrical, and cyber infrastructure. During June, the facility infrastructure team continued to work extensively with the Engineering and Science Departments to focus on refining the operations and maintenance of specific subsystems including carbon monoxide (CO) monitoring, underground phones, leaky feeder (radio), power quality, building upgrades, pumping, dewatering, hoist maintenance and repairs, shaft and science support, and construction projects.

Davis Campus Maintenance

The team monitored and assisted with new equipment installation and ensured the manufacturer standards were met. Electrical inspections and documentation for Surface Lab equipment are continuing. Also, residue acid from copper cleaning was transported to the surface. Yates Shaft personnel assisted with delivery of supplies to the Davis Campus and participated in evacuation drills. Air handling equipment preventive maintenance actions continues with Johnson Controls. The MAJORANA DEMONSTRATOR (MJD) heat exchanger and chiller water pipe insulation replacements continue.

Surface Facility Maintenance Building and Grounds

The SDSTA completed all seven (7) day, thirty (30) day, and annual (360) day preventative maintenance activities. Three staff members participated in the monthly Safety Committee meeting. Boart drill and jackleg repairs continue and non-destructive testing and oiling of ropes at the Yates and Ross Shafts were completed. Two hundred and twenty-five tons of asphalt millings were delivered for road and yard repairs.

Waste Water Treatment Plant (WWTP)

At the end of August, the water level in the underground pool was at 5,712 feet; a gain of 35 feet. Water inflows above the 3650L are averaging 325 gallons per minute. The team continues to support the MJD experiment with neutralizing chemical by-products of their process. All preventative maintenance duties were performed. Facility-wide cleanup and disposal of abandoned in place equipment is continuing. Storm water inspections continue. Preparations for cleaning and repairing the Rotating Biological Contactor (RBC) channel are underway as well as continuing to refine backwash sequences on the filters.

Transportation and Mobile Equipment

The team performed vehicle preventative maintenance actions and repairs to fleet and site vehicles. In addition, the team maintained underground locomotives and support equipment. Also, maintenance on the skid steer loaders and air compressors was completed along with a review of consumable component usage over time for the Fletcher Bolter.

Electrical and Cyber Infrastructure

During August, the SDSTA performed shaft pump preventative maintenance. The team continues to support the Ross Shaft rehabilitation project with the relocation of power cables in the shaft as the new steel is installed. The team continues to work reviewing and modifying the underground communications infrastructure to ensure each level has functional copper-based phones and FEMCO (i.e. twisted pair) phones at each underground facility level; cable replacement continues in the Ross Shaft below the 1250L to the 2450L. The team also continues Level monitoring, 4100L sump project control, and the Compact Accelerator System for Performing Astrophysical Research (CASPAR) and Black Hills State University Underground Campus (BHUC) inspections, outfitting, and installations.

Dewatering

The dewatering team is currently focusing on high-pressure water systems and shaft rehabilitation support. Also, check valve installation and 1250L pump room upgrades continue as well as various pump room repairs/upgrades continue. Installation of six-inch waterline from the Yates to the Ross Campus across the 4850Level is progressing. Also, Standard Operating Procedures (SOPs) and Job Hazard Analyses (JHAs) continue to be developed.

Engineering Department

Joshua Willhite, LBNF Far Site Conventional Facilities Manager

Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Facility (DUNE)

Arup, USA has now provided a 100% preliminary design deliverable for the reference LBNF design. This design is currently being reviewed and cost estimates are in development. This design and corresponding cost estimates will be used as the basis of the Critical Decision 3A (CD-3A) review planned later this year. The CD3A review has been scheduled, with a Directors Review October 27-29 and the DOE Review December 2-4. Both reviews are planned to be held at Sanford Lab in Lead, SD.

The Engineering team continues to support the LBNF Environmental Assessment (EA) process for National Environmental Policy Act NEPA. The comment period concluded July 10. Draft responses to the comments are under review. No new or unexpected comments were received. A Finding of No Significant Impact (FONSI) conclusion is expected.

Discussions continue with the South Dakota Department of Environment and Natural Resources (DENR) and the Federal Environmental Protection Agency (EPA) to establish an agreement for use of the former Gilt Edge Superfund Mine site as a repository for LBNF excavated rock. It was determined that additional engineering study was required to define maximum design and implementation costs associated with the addition of the LBNF excavated rock. CDM Smith, the engineering firm that developed the Gilt Edge Remedial Action Plan, submitted an initial report in July with a recommendation to provide additional modeling and evaluate other areas for beneficial use of the material. This recommendation was converted to a change order, with results in September.

Significant coordination with the DUNE project to enhance understanding of shaft constraints was initiated in April and continued into May. This coordination has evolved and combines with weekly interface discussions to ensure all interfaces are captured. Arup, USA also led a logistics workshop and is following with a detailed study to coordinate all activities associated with the Sanford Lab site, including operations, existing science, LUX-ZEPLIN (LZ), LBNF, and DUNE. This included a 3-day workshop in August including all stakeholders (LBNF, DUNE, LUX, LZ, MJD, CASPAR, BHUC, and Sanford Underground Research Facility Operations). A draft report is scheduled to be delivered September 10 to all stakeholders for review and comment. Any feedback received will be incorporated in a final report scheduled for delivery October 9.

CASPAR (Compact Accelerator System for Performing Astrophysical Research) and BHSU Underground Campus (BHUC)

The CASPAR and BHSU Underground Campus spaces were completed in August. CASPAR experiment installation has commenced and is making very good progress. BHSU is working through the details of installing LN pipes and coordinating the move in of the first low background counters. A commissioning agent is scheduled to provide verification of all systems operations the week of September 7th, after which all contracted construction will be completed.

In support of both the CASPAR and BHSU Underground Campus, a new water supply is required to supply both the cooling system and the fire sprinkler system. The only source currently available at the 4850L is through the Yates Shaft, so this new pipe must originate there. This project continued progress through August with concrete wall construction at the 4100L and pipe hanger and ground support installation on the 4850L.

Sanford Laboratory Homestake Visitor Center

The SDSTA Board of Directors approved additional funding in July for a tribute monument created from part of the original Ray Davis neutrino experiment. South Dakota artist laureate Dale Lamphere completed construction of this monument in August, and it was installed on August 24 followed by a dedication on August 26. The dedication was well attended and the monument has been well received. Several minor items remain on a punch list for completion of the Visitor Center, but this will be the last month to report on this project.

Environment, Health and Safety (EHS) Department

Noel A. Schroeder, EHS Director

Environmental Communication

The South Dakota Department of Environment and Natural Resources (DENR) was contacted concerning the Waste Water Treatment Plant (WWTP) shut down scheduled for September 7-11. Barrick was contacted concerning vegetation 'stress' on the Yates Waste Rock pile. The dead vegetation is on Barrick's property (after a thorough review) and is likely a result of chemical interaction with the waste rock. Barrick is looking into possible causes.

Environmental Compliance

Water

Waste Water Discharge Summary through September 1, 2015:

- Total water discharged through outfall 001 since June 5, 2008: **5,127,636,633 gallons**
- Total Underground water treated since June 5, 2008: **3,012,878,544 gallons**
- Total Tailing water treated since June 5, 2008: **2,256,849,332 gallons**
- Total water discharged to sewer since June 5, 2008: **102,258,487 gallons**

There continues to be no news in regard to the renewal for the National Pollution Discharge Elimination System (NPDES) Permit SD0000043. SDSTA has been legally operating (discharging underground water and Barrick's tailing water) under this expired, existing permit.

The July Discharge Monitoring Report (DMR) was completed in the month of August. There were no violations. The DMR was electronically filed utilizing the NetDMR reporting tool.

The Davis Campus wash water was sampled for coliform/bacteria in August and indicated no bacteria.

The third quarter storm water compliance inspection was completed in August. An additional inspection was completed as a result of a 1-inch rain storm (occurring within a 24-hour window).

The annual bio-assessment and stream chemistry monitoring of Whitewood and Gold Run Creeks were performed by GEI Consultants, Inc.

The annual SDSTA Comprehensive Site Evaluation for Storm Water Discharge Permit SDR00B507 was completed. Various repairs were made to several storm water sediment control sites.

The annual DMR Quality Analysis (35) reporting was submitted to the DENR.

Air

Data continues to be collected for stationary internal combustion engines.

Solid Waste

Recyclables (paper, cardboard, metals, plastic) continue to be collected, picked up by Pacific Steel, a local vendor, and money received for these items.

A leak was discovered in a 5-gallon pail of hazardous waste in the hazardous waste storage building. The building has secondary containment so the leak did not escape into the environment. The leaked material was cleaned up and the waste was repackaged. The leak was caused by a liner failure in the steel 5-gallon container as the waste (WWTP laboratory reagent) ate through the liner and steel. A new liner (plastic vs. epoxy paint) will be used in the future with this waste.

National Environmental Policy Act (NEPA)

The Long Baseline Neutrino Facility (LBNF)/Deep Underground Neutrino Experiment (DUNE) Environmental Assessment (EA) Programmatic Agreement (PA) was finalized in August. Comments were received from the South Dakota State Historical Preservation Office and the Federal Advisory Council on Historical Preservation.

The SDSTA Cultural Advisory Committee was updated on the EA and the PA specifically citing the role and expected activities of the Cultural Advisory Committee.

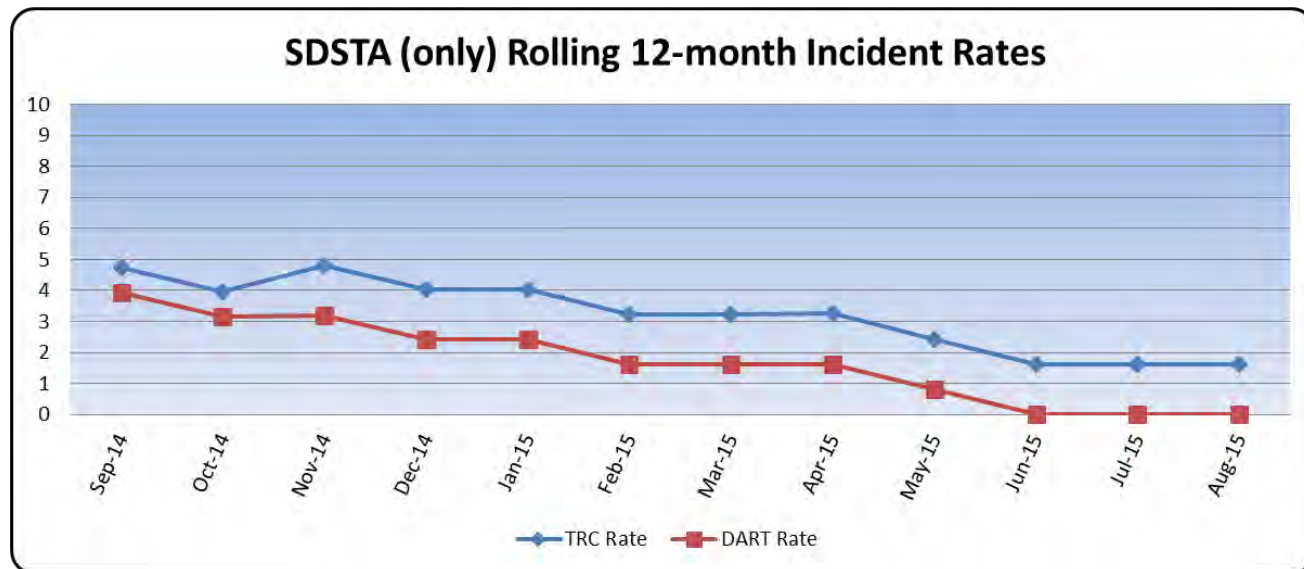
Environmental Support Tasks

Material Safety Data Sheets (MSDS) were inputted into the MSDS database and the database was updated. Many MSDSs are out of date with the new Global Harmonized System requirements. EHS is investigating the linking (or incorporating) of the Fermilab's Hazard Communication (HazCom) database for Safety Data Sheets (SDSs) to the Sanford Lab database for SDSs.

Several EHS safety walk-throughs were completed at the WWTP, Davis Campus, and Ross Campus. Safety items were noted and addressed or are being addressed (documented in the EHS directory). The sumps on the 4850L were labeled as confined spaces.

Testing of various non-chlorinated solvents was conducted to replace two chlorinated solvents currently on-site.

Health and Safety Summary



TRC = more than first aid treatment was given.

DART = more than first aid treatment was given AND restrictions were job limiting or the employee could not work.
(Subset of a TRC)

August 2015 DARTS/TRC:

- No events to report

August 2015 First Aid Cases:

- No events to report

August 2015 Category 1 or 2 Events:

- No events to report

August 2015 Category 3 Events:

- No events to report

August 2015 Items of Interest:

1. Revised Ross Campus site-specific training document
2. Completed air and water sampling report for 4100L Yates future sump site
3. Conducted monthly Annual Refresher Training for Operations personnel
4. Approved seven Underground Guides during the month
5. Monitored radon during 2000L airflow monitor installation
6. Provided Janitor Training to new contractor employee
7. Conducted Emergency Response Team (ERT)/Underground Rescue monthly training; Prepared and performed audiograms for ERT members as well as yearly physicals
8. Provided guide services for a researcher to the 800L for Biology sampling

9. Performed weed control on several areas where leafy spurge was beginning to develop
10. Compiling revisions on the 5-Point Safety Card
11. Completed noise monitoring report for the Fletcher bolter operator at the 4850L west drift and at the Ross and Yates Hoist buildings
12. Examined biological growth at 4850L dehumidifier concrete pad
13. Organized and cleaned the 4850L Refuge Chamber; ordered new food and water provisions to replace expired provisions
14. Conducted monthly fire extinguisher inspections facility-wide
15. Reviewed Job Hazard Analysis (JHA) for Compact Accelerator System Performing Astrophysical Research (CASPAR) mounting accelerator pressure chamber; Reviewed and approved CASPAR Safety Analysis document as well as the CASPAR Safety Analysis document
16. Reviewed JHA's for Black Hills Underground Campus pressure tests and vacuum jacketed pipe installation
17. Performed radon monitoring of Yates Ramp
18. Installed Personal Protective Equipment signage at the Ross Headframe
19. Provided safety oversight during Davis Ring installation at the Visitor Center

Science Department

Jaret Heise, Science Director

With the first of two new laboratories at the Ross Campus coming online in August, attention was paid to balancing resources within the Science Department to support both the Davis and Ross Campuses on the 4850L. In order to facilitate this communication, daily coordination meetings continue to be held near the Davis Campus but now also include research teams working at the Ross Campus.

Updates to the Ross Campus site-specific training materials continue, largely based on practices at the Davis Campus with inputs from several groups. A draft version of the package is available to support initial activities in the new CASPAR and BHUC laboratories in that area, but more work is needed.

In August, a nuclear physics program manager from the National Science Foundation (NSF) visited Sanford Lab to interact with management representatives from both the MAJORANA and CASPAR collaborations.

There were three short power outages in August due to electrical storms (Aug 5, Aug 17, and Aug 26). In each case, multiple groups were affected both on the surface and underground.

Contractors were active at the Davis Campus through August, during which time the commissioning of the MJD heat exchanger was completed. Pipe insulation continues to be replaced in key areas near the Yates Shaft.

The optical fiber cable in the Ross Shaft was damaged, but the network at the Davis Campus was not interrupted due to redundancy. A redundant network topology is planned for the Ross Campus, and additional diagnostics are being considered to help quickly identify similar issues in the future.

Regular Davis Campus evacuation drills/discussions continued through August, with a fire scenario along the primary egress route.

Large Underground Xenon – LUX

LUX continues to be in a stable data-taking mode, and has now accumulated more than 190 live days with a goal of reaching 300 live days for this run. Xenon purity dipped slightly as a result of the brief power outages that affected circulation, but remains relatively high – 662 microseconds (electron lifetime). Although purity is expected to increase, this level is more than sufficient for high-quality data. The end of data-taking continues to be projected as mid-2016.

Standard calibrations continued in August with krypton (Kr), cesium and LED data sets collected. The rubidium (^{83}Rb) contained in the $^{83\text{m}}\text{Kr}$ source has a low activity (~10 microCuries in October 2012 with an 86-day half-life), and now that over twelve half-lives have elapsed there have been some initial discussions regarding a replacement. The new Kr source is expected to be lower activity (~0.1 microCuries). Brass fasteners for the metal holder used to lower sources next to the LUX detector through tubes were replaced with stainless steel ones. Tritium runs are planned for late September and the next neutron generator dataset is scheduled for early October.

Following the connection to the Davis Campus facility compressed air line in July, LUX added some additional monitoring equipment in August, including a pressure gauge; SDSTA personnel also replaced a leaking regulator. Even though the compressor needed to be reset during one of the recent power outages, the static pressure was fine and in general the system has suited LUX's needs well.

In addition to regular xenon (Xe) sampling, the sampling system was recalibrated following a hardware change.

August saw work on the muon veto system. In particular, a problem with elevated data rates on the water tank photomultiplier tubes (PMTs) was resolved by reseating some cables and terminating others. During the debugging, it was noticed that one PMT cable had been unplugged for approximately one month.

SDSTA personnel continue to fulfill their expanded responsibilities by connecting/disconnecting the liquid nitrogen tanker.

Training remains a priority, and in August LUX personnel focused on the Xe sampling, high voltage grids, and PMT systems. All action items from the April LUX safety review initiated by LBNL were evaluated in August and closed per the SURF process.

As detector operations remain stable and as SDSTA personnel increase their level of direct support for regular tasks, the number of scheduled LUX hours continues to be modest. In August, the average LUX crew consisted of five people for a combined total of 300 hours.

MAJORANA DEMONSTRATOR – MJD

Acceptance testing of the final enriched germanium detectors was completed in August, after which the five detectors were removed from the vendor-supplied cryostats for further tests. Further tests were conducted on germanium detectors involved in a previous incident with the glovebox lift, and it was determined that two detectors will need to be returned to the vendor.

Background and calibration data continue to be collected with Module 1 inside the main shield. In August, there was good progress on the inner copper shield needed to complete the main shield. Half of the plates have been completed so far and those were successfully test-fitted in the Machine Shop, while the machining for the remaining plates is expected to be completed in early September. All of the plates will need to be acid-etched as part of the final cleaning process. Based on earlier assays, a more aggressive etch is being considered. In total, the inner copper shield will be approximately 2 inches thick, made with electroformed copper from twelve mandrels, including materials from a shallow underground site at Pacific Northwest National Lab (PNNL) (outer 50%) and from the electroforming laboratory at Sanford Lab (inner 50%).

Cryostat gasket testing continues with various thicknesses of PTFE, while a larger chamber to allow parylene coating of curved geometries is expected to arrive in September for use at the Surface Laboratory. The PTFE material still needs to be assayed to determine the radiopurity.

Numerous tests and upgrades of the data acquisition system were performed in August.

There was progress on detector string assembly for Module 2, and by the end of the month a second detector string had been assembled and was undergoing tests. The goal is to have Module 2 in the shield by the end of 2015.

Progress continues with the outer neutron shield, including significant activity on the surface cutting and staging polyethylene panels. Additional discussions have been held with MJD representatives to coordinate the installation of additional fire monitoring systems at the Davis Campus, and as noted above, the new heat exchanger system that will be used to cool inner volumes of the shield is fully commissioned and operational. With the last scintillator panels for the muon veto system transported underground in July, the full system was brought online in August.

A steady stream of updates to existing MJD procedures covering a wide range of activities continue to be submitted to Sanford Lab for review by EHS and Engineering personnel.

Maintenance and operation continues for the five production baths (plus one bath to study contamination) at the electroforming laboratory near the Ross Shaft. Power outages caused some disruption of electroforming as well as electrowinning (copper removal from spent electrolyte) activities in August.

While still significant, MAJORANA returned to their standard level of effort for August with an average of more than 10 people combined for a total of 1834 hours for the month.

Compact Accelerator System for Performing Astrophysical Research – CASPAR

Following the arrival of the first shipment of accelerator equipment from Notre Dame in July, the second shipment in August coincided with the authorization for initial installation at the 4850L Ross Campus. By the end of the month, all of the accelerator equipment had been transported underground and many of the main beamline magnets had been placed in their approximate locations in the accelerator hall.

Black Hills State University Underground Campus – BHUC

With outfitting construction finished by the end of August, authorization for initial installation activities was issued for BHUC at the 4850L Ross Campus in early September. The first order of business was the installation of the vacuum-jacketed piping for the liquid nitrogen distribution system with assistance from SDSTA Engineering personnel, and initial progress indicates that the components should fit.

Low-Background Counting

Center for Ultra-Low Background Experiments in the Dakotas – CUBED: The upgraded CUBED low-background detector is expected to be returned from the vendor to Sanford Lab in the fall, hopefully in time to be the first low-background counter installed in the new BHUC facility.

Berkeley Low-Background Facility – BLBF: Production low-background counting with two detectors continues at the Davis Campus, mainly supporting LUX-ZEPLIN and MJD samples. Decommissioning plans continue to advance, taking into consideration upcoming LUX calibrations at the Davis Campus that will affect assay sensitivities.

LUX-ZEPLIN – LZ

A meeting to discuss options for providing reduced-radon air to underground laboratory spaces was held in August and included representatives from various SDSTA departments as well as key experts from the LZ collaboration. Later in the month, a kickoff meeting was held between LZ management and the two co-chairs for the initial safety readiness review that will be held October 13-14. The committee is expected to be engaged for approximately five reviews associated with key project milestones.

Other Current Research Activities

Physics: Following the completion of their decommissioning plan and procedures, authorization was issued to decommission the CUBED magnetic diffusion project (ISUP) at the Surface Laboratory. University of South Dakota (USD) personnel removed most of the experimental equipment September 2.

Members of the Deep Underground Gravity Laboratory (DUGL) plan to return to Sanford Lab in September for three weeks to perform maintenance on their seismometer array (2000L) as well as to conduct active seismic tests using weights (surface) and a hammer (2000L, 4100L, and 4850L) to generate signals.

Geology: The memorandum of understanding language for the Permeability (k) and Induced Seismicity Management for Energy Technologies (kISMET) project was finalized and hardcopies will be signed in early September. A kick-off session was held with the Rock Melt Borehole Sealing System project, including an underground trip to a set of candidate sites on the 1700L and 1850L as well as a presentation by the project PI to SDSTA personnel from various departments. Both groups need to complete further documentation associated with the science implementation process.

Biology: To assist next steps for the NASA Astrobiology group, SDSTA personnel began compiled and distributed geology information for drill holes that are accessible from maintained areas on the main science levels.

Engineering: Xilinx chip testing continues at the 4850L near the Davis Campus. The main testing computer was damaged by a power outage, and once it returns an additional array of chips (previously tested in an underground facility in France) will be added to the testing station.



Fig. 1 MJD test-fit of half of inner copper shield.

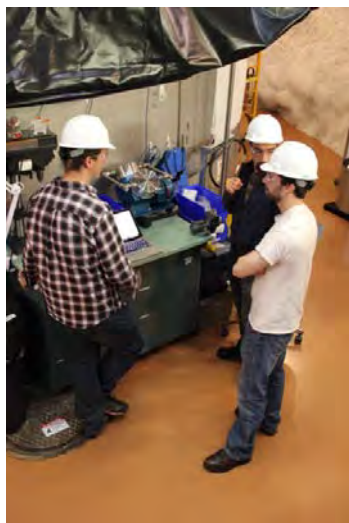


Fig. 2 LUX training.



Fig. 3 Beamline magnets at the 4850L Ross Campus CASPAR laboratory.



Fig. 4 LN piping at the 4850L Ross Campus BHUC laboratory.

Education and Outreach Department

June Apaza, Director of Education and Outreach
KC Russell, Cultural and Diversity Coordinator

Education Offerings / Programs

Cultural Activities

The Cultural Advisory Committee met on August 31. Reports were given by:

- Environmental Manager John Scheetz (EA/PA agreement status)
- Education and Outreach (E&O) Director June Apaza (E&O activities and reorganization)
- Cultural and Diversity Coordinator KC Russell (cultural activities)
- Human Resources Manager Eileen Brosnahan (hiring)
- SDSTA Executive Director Mike Headley (leadership, funding and LBNF/DUNE status)
- Communications Director Constance Walter (strategic planning process)

In addition, the committee reviewed progress towards fulfilling the recommendations of the last annual review in February 2015, discussed changes in the charter to meet the responsibilities of the LBNF/DUNE Programmatic Agreement, and toured the new Sanford Lab Homestake Visitor Center with Connie. Members of the Cultural Advisory Committee in attendance were George Campbell (Chair), Lowell Amiotte, Kay Jorgenson, Carter Kerk, Urla Marcus and Rylan Sprague.

The Black Hills State University (BHSU) Bridge program provides a week of orientation for American Indian students transitioning into college at BHSU. Sanford Science Education Center co-Director Ben Sayler and Connie gave an introduction to Sanford Lab and an overview of student opportunities related to Sanford Lab. The next day 19 of the students toured the Yates Hoistroom with E&O Deputy Director Peggy Norris and then spent time at the Visitor Center.

K-12 Educators and Students

The E&O Department is pleased to announce expanded offerings for K-12 schools.

- **Curriculum Units** – The expanded offerings include newly developed curriculum units that are aligned with the new South Dakota Science Standards and that feature the science of Sanford Lab. Two units have been developed for each of three grade bands, and each unit encompasses 7-10 days of classroom instruction. In 2015-2016, Sanford Lab E&O staff will directly support teachers across the state whom wish to pilot one of the units.
- **School Visits** – The offerings also include visits by Sanford Lab staff to schools to build awareness of Sanford Lab and its E&O program. This component consists of 20 to 40-minute presentations in an assembly or classroom format. These will be short, engaging experiences designed to stimulate interest in STEM fields and the exciting science happening at Sanford Lab. Topics will change annually.
- **Field Trips** – A limited number of days are available each fall and spring for schools that are able to travel to Sanford Lab. Program offerings are grade-band appropriate and aligned with SD science standards. A new website is now open for schools who wish to apply for a fall field trip.

The E&O staff is currently recruiting teachers and classrooms to participate in the educational opportunities that have been developed. An effort is being made to reach out specifically to schools and districts serving large numbers of American Indian students and other under-served populations. In addition, we are approaching tribal colleges about opportunities that exist for them related to the new curriculum materials.

A synopsis of the new offerings is given in Appendix A.

E&O Deputy Director Peggy Norris is Principal Investigator (PI) and June Apaza is co-PI for a NASA South Dakota Space Grant Consortium Program Innovation Grant for \$20,148 to provide teacher stipends, travel funds, material kits and evaluation of 2015-2016 school year pilots for the new curriculum units.

Undergraduate

A report on the 2015 Davis-Bahcall Scholars program, including survey results of 2015 participants and a tracking update on past participants, is given in Appendix B.

Peggy is co-PI for a recently submitted proposal to the National Science Foundation to establish a Research Experience for Undergraduates (REU) program on underground physics at South Dakota School of Mines and Technology (SDSM&T). As described in the proposal, Sanford Lab Education and Outreach staff will partner with SDSM&T to provide an educational and enrichment program for REU students together with Sanford Lab's interns, with workshops held at the SDSM&T campus as well as underground activities at Sanford Laboratory. Sanford Lab commitments for the proposed program will be coordinated by the E&O Department. The REU proposal also includes training for mentors.

Table 1. Estimated Audience Served – August 2015

Group	Students					Educators			Community		
	K-5	6-8	9-12	Undergrad	Graduate	K-12 Teachers	Univ. Faculty	Informal	Parents	Sanford Lab Staff	General Public
ON-SITE											
BHSU Bridge Program-Hoist Room tour				19							
Subtotal	0	0	0	19	0	0	0	0	0	0	0
OFF-SITE											
BHSU Bridge Program –BHSU talk*				16			1				
Road Scholars (x4)*											160
Davis Memorial Dedication**										32	33
Subtotal	0	0	0	16	0	0	1	0	0	0	160
VIDEOCONFERENCE											
Subtotal	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	35	0	0	1	0	0	32	193
Grand Total: 261 students, educators and members of the general public, of which 35 were students or teachers engaged in programs specifically designed to interest or support more American Indian students in STEM.											

* joint Sanford Lab Communications/E&O Departments activity

** Communications Department activity

APPENDIX A. E&O Offerings 2015-2016

Sanford Lab School Visits 2015

Elementary (Grades K-5)

A Day in the Life of a Scientist: Working a mile underground is unique. How do the scientists who work at Sanford Lab every day get underground? What do they wear and what do they do? This engaging presentation will have students playing scientist in an underground research laboratory.

Nerds Searching for WIMPS: Students are introduced to dark matter - a mystery particle that is much more abundant than anything in the universe, but has not (yet) been detected – and to the experiment, LUX, that is searching for it at Sanford Lab. Students will participate in a tag game that simulates the components and interactions within the LUX detector. Recommended for grades 3-5.

Middle School (Grades 6-8)

Discover Exciting Career Possibilities: Students will learn about the current work at Sanford Lab and discover potential careers in STEM fields. Operating a research facility nearly a mile underground requires personnel with a wide range of skills. This is a great opportunity for students to learn about the scientists, engineers, and other professionals that build and design the spaces, develop the tools, collect the data, support the work, and research the questions that are behind the cutting-edge experiments.

High School (Grades 9-12)

Neutrinos – Matter or Not?: Students will learn about an experiment that will transform our understanding of one of the universe's most abundant but most mysterious particles, neutrinos. The Deep Underground Neutrino Experiment at Sanford Lab will study neutrinos as they oscillate their way through Earth to South Dakota from an accelerator 800 miles away at Fermilab outside of Chicago. Construction will start in a few years, and experiments in this new facility at Sanford Lab will last decades.

Curriculum Units

Grade Band	Title	Synopsis
3-5	May the Force Be With You	Students explore magnets and magnetic forces, and rotational and linear motion induced by magnets.
	Exploring the Unseen	Students gather and use indirect evidence to reason about things too small to see, too remote to reach and otherwise difficult to detect.
6-8	Monster Waves	Students explore wave properties, how energy is transferred through waves and how waves moving through media give information that can be used for a variety of purposes.
	What's the 'Matter' with the Big Bang	In this unit, students explore matter and interactions through a variety of activities focusing on the very big (galaxies) and the very small (neutrinos and other subatomic particles).
9-12	Perplexing Puddles	This unit, designed for high school biology classes, highlights a NASA-funded research project at Sanford Lab called 'Life Underground'.
	'We are Made of Star-stuff'	This unit, designed for high school chemistry classes, uses nucleosynthesis in the cosmos to introduce the structure of matter, the periodic table and nuclear processes.

APPENDIX B. Davis-Bahcall Scholars Report

2015 Program Overview

The Davis-Bahcall Scholars Program provides rising college freshmen and sophomores from across South Dakota with rich learning experiences at the Sanford Underground Research Facility and around the world. The program has been sponsored by 3M Company in partnership with the Governor's office, the State of South Dakota, Sanford Lab, and Black Hills State University for the past seven years.

The 2015 Davis-Bahcall Scholars Program was an excellent success. Nine scholars participated over five weeks – from June 7 through July 12. The program began with two weeks at Sanford Lab, followed by a drive to Chicago, a week in Italy, and finally back to Sanford Lab. Highlights from South Dakota to Chicago included visits to a 3M facility in Aberdeen, Soundan Underground Lab in Minnesota, physics facilities at University of Wisconsin, and tours of both Fermilab and Argonne National Lab. In Italy, the group toured a laboratory and cultural attractions in Rome, Gran Sasso National Laboratory in L'Aquila, and an observatory in Teramo. When students returned from Italy, they facilitated education activities as part of Neutrino Day, and on the following day, as part of a farewell luncheon, they each made a presentation to an audience of program learders, Sanford Lab staff, and their families.

With help from Sanford Lab's Education and Outreach Team, the Sanford Science Education Center, and a newly established Davis-Bahcall Advisory Committee, this year's program was coordinated by Dr. Brianna Mount, Assistant Professor of Physics Research at Black Hills State University. Direct costs of the program totaled \$57,500. Funding sources included \$25,000 from 3M Company, \$14,500 from the South Dakota Science and Technology Authority, \$10,000 from BHSU, and \$8,000 from South Dakota Space Grant Consortium. Hundreds of hours of in-kind support were also invested by Sanford Lab's E&O Team, additional Sanford Lab staff, the Sanford Science Education Center, BHSU, Augustana University, and faculty and staff at all of the participating institutions and facilities.

A summary of participant feedback for 2015 is attached. These data provide strong evidence that the program is well designed and that it was well implemented, impactful, and greatly appreciated by the participants. Longitudinal data tables summarizing participant demographics from 2008 through 2015 are also attached, together with a table that tracks academic paths and career trajectories of the program's 97 alumni.



Davis-Bahcall Scholars Program
2015 Participant Feedback
September 4, 2015

At the conclusion of the 2015 Davis-Bahcall Scholars Program, participants were instructed that within a few weeks, after having had some time to reflect on the full experience, they would be asked to provide anonymous feedback about the program. The program ended on July 12, and an online survey was activated on July 27. By August 11, all nine of the scholars had completed the survey.

In an effort to maximize candor, the survey was administered by the director of the Sanford Science Education Center rather than by the program coordinator. The students had met the director of the Center, but only briefly, whereas they had spent a full five weeks together with the program coordinator.

The survey consisted of twelve questions. The first two questions were free-response. The next eight questions asked for a rating on a 5-point scale and allowed for comments. The final two questions were free-response. All respondents appeared to have given the survey considerable thought and to complete it thoroughly. The shortest response time was 23 minutes. The majority of response times fell between 23 and 45 minutes. A few longer response times suggest that those surveys were completed over multiple sittings.

The feedback that follows is quite affirming. Ratings were consistently high and comments positive. There are constructive suggestions about refinements for the future, but overall, this feedback provides strong evidence that the program is well designed as it stands, was very well implemented, and was much appreciated by the participants.

1. What were the 5 most impactful activities and/or program elements over the 5 weeks? Please be specific and tell us why.

Responses to this question were uniformly glowing. As one student wrote, *"Where do I start? It's fairly difficult to choose as there was never a day / activity that wasn't interesting."*

The following components appeared in most, if not every response:

- Time spent at Sanford Underground Research Facility
 - In-depth lectures about physics
 - Learning about Sanford Lab experiments
 - Going underground to see the experiments and to count cosmic rays
- Travel to other science and engineering facilities in the US
 - Fermilab, Argonne, 3M, University of Wisconsin, and Soudan
- Going to Italy and touring Gran Sasso, Frascati, and Teramo Astronomical Observatory
- Physics and engineering panels. Students appreciated the academic and career advice.
 - Engineering panels at 3M and Sanford Lab, panel of physicists in Lead

Other items of note included:

- Program personnel
- Hands-on activities, as something different from lectures
- Outreach activities, working with general public at Neutrino Day and in Spearfish
- Tourist activities, especially in Rome, and recreational activities like canoeing and hiking

One student wrote specifically with regard to visiting Italy, *"Being able to experience another culture as well as being able to tour the national laboratories there created a perfect balance of education and fun!"* Another wrote, *"Maybe I'm just an inherently boring person, but I think it's fair to say these five weeks have been the best 5 weeks of my entire life."*

2. What 5 activities and/or program elements might you suggest we consider discarding or replacing. Please be specific and tell us why.

Responses to this question were much shorter in general than to the preceding one, but the majority of scholars did make a concerted effort to respond thoroughly with constructive criticism.

One particularly useful comment, which showed up a few times, was about repetition from one tour or presentation to another. The tour guides and other presenters were often unaware of what the group had already learned about. Some amount of repetition is certainly to be expected and even beneficial, but it's worth taking this comment to heart and ensure presenters have a good understanding of what the students have already experienced and heard about. Also, presenters shouldn't be shy about opening with some amount of conversation with the group to help gauge the group's background.

Most of the other comments were singletons -- and often an activity that one participant mentioned as replaceable or discardable was one that appeared as a favorite for others on the preceding question.

Building robots falls into this category to some degree - a highlight for some and replaceable for others. More than replacing it, however, the two scholars who mentioned it here suggested modification: Shorten and/or ensure there's enough to be learned to justify the amount of time.

The panels fell into this category as well. They were a highlight for many, but others wished for more structure to the panel discussions and some noted some amount of intimidation about speaking up and asking questions in these venues.

One other piece of important feedback relates to an inherent tension associated with the age and maturity level of the students. The program had a "rule of 3," meaning that scholars who wanted to do something away from the larger group when the group was traveling needed to do so with at least two companions. For safety and tracking purposes, this makes a lot of sense, but some found it overly restrictive. Even if the rules remain exactly the same in the future, it is worth being aware of this tension.

3. Balance of Activities - All

Please think about the proportion of time spent doing various types of activities - educational activities, travel, social, recreation, free-time. Was there too much of something? Too little? Overall, the balance of activities was...

Poor Fair Good Very Good Excellent



Quite positive comments overall. No clear guidance one direction or another. Some wanted a little more of something, whereas others wanted a little less of the same thing. As one student summed it up, *"I think the balance was pretty well struck."*

There was a great balance of everything. The travel was much more bearable than I thought it would be. It was really nice the few times that we got to stay in the hotels for more than one night since we didn't have to pack everything up right away.

4. Balance of Activities - Educational

Specifically with respect to the educational activities, please think about the proportion of time spent doing various types - listening to lectures, participating in seminars, taking tours, traveling, doing activities, participating at Neutrino Day, etc. Overall, the balance of the educational activities was...

Poor Fair Good Very Good Excellent



Some wanted more lectures, some accepted the importance of many lectures, and some wanted more hands-on, active learning.

Talks were great.

A few too many lectures.

I wish there had been more in-depth lectures, but I thought that overall, everything was very balanced.

There were a lot of lectures with a lot of information early in the program, but I still found them very interesting and very necessary.

I would have enjoyed more hands on activities, so more things like: Counting cosmic rays/radiation, Neutrino Day activities, building robots.

5. Level of Difficulty

In general, were lectures and activities pitched at a good cognitive level for you?

Too Easy Pretty easy, but okay Just right Pretty hard, but okay Too hard



Five scholars rated the level of difficult as 'just right', three rated it as 'pretty hard, but okay', and one responded 'quite mixed' (not shown). Erring a bit on the hard side seems appropriate for this audience. The following quotes capture the range of comments.

Since I didn't have a background in particle physics the first few lectures where hard to understand. By the end of the program it was much easier to understand.

The lectures fluctuated in difficulty. Some speakers would baby you through something you already knew, some would be just right, and some went very deep very fast.

The topics were difficult, yes, but they were a good kind of difficult. Not 'I don't get this, this is frustrating' difficult, more along the lines of 'This is challenging, I like it,' if that makes sense.

6. Level of Interest

Across the program as a whole, how engaging and interesting was the range of content - different types of science, engineering, and laboratory operations?

Very boring | Moderately boring | Neutral | Moderately interesting | Very interesting



Most comments focused on the program's balance across different science and engineering disciplines. Comments indicated the program tilted pretty heavily toward physics, but in general that seemed to be acceptable.

Very physics focused, I loved it. Others were engaged, but not enough in other fields. Don't change the program / maybe just advertise a bit more specifically.

We saw a bit of everything. It would've been really difficult to be bored with the broad range of topics presented to us over the course of the program, even if some or most of them didn't directly apply to our choice of career field.

I thought there was a wide range of content that still fell under the umbrella of research/physics.

Although I am not going specifically for physics, the program was still interesting for me.

Note that one rating of this question as 'very boring' was discarded because the associated comments were inconsistent with the rating.

7. Level of Enjoyment / Fun

Highly unpleasant | Moderately unpleasant | Neutral | Moderately enjoyable | Highly enjoyable



Positive comments across the board, *"The education as well as the free time was highly enjoyable, and it was a great group of people!"*

8. Duration of Program

Too short | A bit too short | Just right | A bit too long | Too long



There was nearly complete consensus that five weeks is 'just right'. *"Five weeks is a good amount of time - it allowed us to go through with all of our plans without feeling rushed or drawn-out."*

9. Accommodations / Organization / Logistics

This category includes things like food, housing, travel, and scheduling.

Poor | Fair | Good | Very Good | Excellent



A minor hiccup here and there, but overall very positive. A couple of students expressed desire to receive updated schedules along the way to account for modifications. For one student the accommodations were fancier than he or she was accustomed to, and that felt somewhat uncomfortable. Most felt the accommodations were just right, if not outstanding.

10. Overall Quality of the Program

Was this a good use of your time? Would you recommend it to a friend? Thinking across all aspects of the program - educational, social, and organizational - how would you rate the 5 weeks...

Poor	Fair	Good	Very Good	Excellent
				<input checked="" type="radio"/>

All of the comments about overall quality were very positive.

I would definitely recommend this program to a friend - I gained many valuable insights, both about physics and about my future career plans. The experience to visit the likes of Fermilab and Gran Sasso was an amazing opportunity, and I am glad to have been able to be a part of it.

This program was very helpful. It has helped me more than I imagined. I think it gave me more confidence that I picked the right major.

Certainly the most unique and interesting program I've ever participated in. I will certainly recommend this to my high school teachers.

Questions 11 and 12: The final two questions asked about the timing of the program and about its impact on participants' internship opportunities. With regard to the timing of the program, organizers were curious if students might have preferred for the program to happen earlier in the summer or later in the summer (actual dates were June 7 - July 12). Two students indicated that earlier would have been preferable in order to have had a larger block of time later in the summer to do something else, but the other seven felt the timing of the program was good, and many used the word "perfect." Different academic calendars of different high schools and colleges make moving the program closer to the beginning or end of the summer tricky.

With regard to internships, all of the Davis-Bahcall Scholars were offered the opportunity to pair a short internship with the 5-week program. Four took advantage of that offer, and five did not. Those who were provided with an internship in conjunction with the program were appreciative of that opportunity. Most of the others indicated they were interested in an internship sometime later in their academic career, but were perfectly happy not to have had one in 2015. As one student said, *"I had a choice between an internship and this program. I immediately chose [this program] because of the opportunity. Yes it replaced an internship, but at this age [incoming college freshmen and sophomores], it makes very little difference... If the program were for college juniors, it would be an issue."*

Davis-Bahcall Scholars

Program Attributes, Demographics, and Student Tracking

Table A. Components of Program by Year

YEAR	# of Students	EUROPE			DOE National Labs			U.S. Universities					Facilities		
		CERN	Gran Sasso	Frascati	Brookhaven	Fermilab	Argonne	Princeton	Chicago	Notre Dame	Wisconsin	Stony Brook	Sanford Lab	Soudan	NOvA
2008 (pilot)	2		✓					✓							
2009 (DB)	10	✓	✓	✓				✓					✓		
2009 (SS)*	17				✓	✓	✓					✓	✓		
2010 (DB)	10	✓	✓	✓				✓					✓		
2010 (SS)	10					✓	✓						✓		
2011	10					✓	✓	✓			✓		✓	✓	✓
2012	10		✓	✓		✓	✓		✓	✓			✓		
2013	9		✓	✓		✓	✓			✓			✓		
2014	10		✓	✓		✓	✓				✓		✓	✓	✓
2015	9		✓	✓		✓	✓				✓		✓	✓	✓
Totals	97	20	60	58	8	67	67	32	10	20	29	8	95	29	29

* 8 students went to Brookhaven National Lab + State University of New York at Stony Brook; 9 students went to Fermilab and Argonne.

Table B. Gender Distribution of Students

Year	# Students	Female		Male	
		#	%	#	%
2008	2	1	50	1	50
2009	27	8	30	19	70
2010	20	8	40	12	60
2011	10	5	50	5	50
2012	10	4	40	6	60
2013	9	4	44	5	56
2014	10	6	60	4	40
2015	9	3	33	6	67
Total	97	39	40	58	60

Table C. Ethnicity of Students

Year	# Students	Caucasian		American Indian		African American		Hispanic		Asian American	
		#	%	#	%	#	%	#	%	#	%
2008	2	1	50	1	50	0	0	0	0	0	0
2009	27	25	93	1	3.5	0	0	0	0	1	3.5
2010	20	19	95	0	0	1	5	0	0	0	0
2011	10	9	90	0	0	0	0	0	0	1	10
2012	10	8	80	1	10	0	0	1	10	0	0
2013	9	8	89	0	0	0	0	0	0	1	11
2014	10	8	80	0	0	0	0	1	10	1	10
2015	9	8	89	1	11	0	0	0	0	0	0
Total	97	86	89	4	4.0	1	1.0	2	2.0	4	4.0

Table D: Tracking of Program Alumni - College Graduates

Student	Program Year	College	Grad Year	Major	Career Path	Location
1	2008	SDSU	2013	ElectricalEng/ Physics	Other	Benedictine Order, Norfolk, NE
2	2008					
3	2009	BHSU	2012		Nursing School	USD
4	2009	Montana St	2013	Chem/Bio Engineering	Workforce	Nalco, Bozeman, MT
5	2009	Univ of Penn- sylvania	2013	Architecture	Workforce	Joeb Moore&Partners, PA
6	2009	SDSMT	2013	Industrial Eng/Manage ment	Workforce	Hormel Foods, Rapid City, SD
7	2009	SDSU	2013	MechEng/Sp anish	Workforce	Walt Disney World, Orlando, FL
8	2009	Univ of Iowa	2013	Biochem/Mic roBio	Graduate School (MD/PhD)	Univ of Washington, Seattle, WA
9	2009	SDSMT	2012	Chemical Engineering	Workforce	Dow Chemical, Midland, MI
10	2009	Univ of Minnesota	2012	Chemistry		
11	2009	SDSU	2013	Math/Physics	Graduate School (MS)	Department of Mathematics, SDSU
12	2009	Montana St	2013	Physics	Graduate School (PhD)	Rochester Inst of Technology, Rochester, NY
13	2009	SDSMT	2013	Civil Engineering	Workforce	State of South Dakota, Pierre, SD
14	2009	SDSU				
15	2009	Cornell Univ (NY)	2013	Environment al Research Associate	Workforce (working on masters)	Diversified Landscapes, Orange County, CA
16	2009	Univ Nebraska	2013	Software Engineering	Workforce	MarketSphere, Lincoln, NE

Table D: Tracking of Program Alumni - College Graduates (continued)

Student	Program Year	College	Grad Year	Major	Career Path	Location
17	2009	Carleton College (MN)	2013	Environmental/Biochem	Workforce	Dana Farber Cancer Inst, Boston, MA
18	2009	Hope College (MI)	2013	Biochem/Molecular Bio	Graduate School (PhD)	Molecular Biology Dept, Univ of Michigan
19	2009	Univ Sioux Falls	2013	Biology	Graduate School (PhD)	Cell/Molecular Biology, Colorado State
20	2009	SDSU	2013	Biology/Spanish		
21	2009	Padova, IT	2013	Civil Engineering		
22	2009	Augustana	2012	Phys/Math/Chem	Graduate School (PhD)	Physics, Univ of Minnesota
23	2009	SDSU	2013	Mechanical Engineering	Workforce	Rochester, MN
24	2009	USD	2012	Chemistry	Professional School (MD)	USD
25	2009	SDSMT	2012	Electrical Engineering	Workforce	QEP Resources, WY
26	2009	UNLV (NV)	2013	Film	Workforce	Shoreline Entertainment, NV
27	2009	Creighton (NE)	2013	Math/Physics	Graduate School (PhD)	Physics Department, Creighton Univ, NE
28	2009	Augustana	2012	Biology/Engineering	Other	Peace Corps, Africa
29	2009	SDSU	2012	Biology	Nursing School/Workforce	St Luke's Hospital, SD
30	2010	Univ Nebraska	2014	Computer Engineering	Workforce	Microsoft, Redmond, WA
31	2010	Montana St	2013	Physics	Graduate School (PhD)	Dept of Physics,
32	2010	St Thomas (MN)	2014	Mechanical Engineering		
33	2010	BHSU	2013	Biology&Chemistry	Science Education	Teaching, SD

Table D: Tracking of Program Alumni - College Graduates (continued)

Student	Program Year	College	Grad Year	Major	Career Path	Location
34	2010	Washington Univ (MO)	2014	Political Science	Professional School (MBA)	Washington Univ., St Louis, MO
35	2010	SDSU	2014	Electrical Engineering		
36	2010	USD	2013	Physics/Math	Graduate School (PhD)	Dept of Mathematics, USD
37	2010	SDSMT	2014	Mechanical Engineering	Workforce	Parker-Hanlin, McCook, NE
38	2010	Concordia College (MN)	2014	Math/Physics	Graduate School (PhD)	Univ of Notre Dame, IN
39	2010	Colorado School of Mines	2014	Environmental Engineering	Workforce	Alan Plummer Associates, Ft Worth, TX
40	2010	SDSMT	2013	Industrial Eng/Eng Management	Workforce	Peabody Energy, Gillette, WY
41	2010	SDSMT	2015	Chemical Engineering	Graduate School (PhD)	Dept of Materials Sci, Purdue University, IN
42	2010	SDSU	2014	Civil Engineering	Graduate School (MS)	Dept of Civil Eng, SDSU
43	2010	Mt Marty College	2012	Biology		
44	2010	SDSU	2014	Civil Engineering	Graduate School	Dept of Civil Engineering Colorado School of Mines, CO
45	2010	Purdue Univ (IN)		Mech Eng/Physics		
46	2010	St. John's (MN)	2014	Biology/Spanish		
47	2010	SDSMT	2014	Chemical Engineering	Workforce	Dow AgroSciences,
48	2010	Augustana	2013	Physics	Graduate School (PhD)	Dept of Physics, Univ of Colorado, CO
49	2010	SDSU	2013	Music		

Table D: Tracking of Program Alumni - College Graduates (continued)

Student	Program Year	College	Grad Year	Major	Career Path	Location
52	2011	SDSMT	2015	Chemical Engineering	Workforce	Davisco Foods, Jerome, ID
53	2011	Augustana	2014	Biology		
54	2011	Iowa State	2015	Chemical Engineering		
56	2011	Drake (IA)	2015	Physics		
57	2011	Augustana	2015	Biochemistry	Professional School (MD)	USD
59	2011	Univ of Minnesota	2015	Aerospace Engineering		
67	2012	Northern State	2015	Biology	Intern	USDA Biotechnology, Orlando, FL
68	2012	SDSMT	2015	Computer Science	Workforce	Software Engineer Innovative Systems

Table E: Tracking of Program Alumni - Current Undergraduates

Student	Program Year	College	Anticipated Graduation	Major	Recent Internships
50	2011	Drake (IA)	2016		
51	2011	SDSU	2016	Civil Eng / Spanish	Indian Health Service - 2013 SDSU – 2014 HR Green, Inc - 2015
55	2011	Univ of Illinois	2016	Computer Science	Argonne – 2013 Intel - 2014
58	2011	SDSMT	2016	Chemical Engineering	POET - 2014
60	2012	SDSMT	2016	Biological & Chemical Engineering	NASA Johnson Space Center - 2013
61	2012	Wartburg (IA)	2016	Biology/Spanish	
62	2012	UC Berkeley (CA)	2016	Physics	Sanford Lab – 2013 UC Berkeley - 2014
63	2012	Univ. of Oklahoma	2016	Engineering Physics	OU - 2013
64	2012	Augustana	2016	Chemistry/Physics	Sanford Research - 2015
65	2012	Univ of Colorado	2016	Aerospace Engineering	Colorado State LASP - 2014
66	2012	SDSU	2016		
69	2012	SDSU	2016		OSSPEEC (pre-engineering) - 2013
70	2013	SDSMT	2017	Chemistry	SDSU - 2014
71	2013	SDSMT	2017	Computer Engineering	Innovative Systems - 2013 SDSMT - 2014 Omnitech, Inc- 2015
72	2013	Univ of Minnesota	2017		3M Aberdeen - 2013
73	2013	SDSMT	2016	Mathematics	Sanford Lab - 2014

Table E: Tracking of Program Alumni - Current Undergraduates (continued)

Student	Program Year	College	Anticipated Graduation	Major	Recent Internships
74	2013	Montana St	2017	Mechanical Engineering	
75	2013	Augustana	2017	Physics/Math	Augustana - 2013, 2014 Iowa State - 2015
76	2013	SDSU	2017	Mechanical Engineering	
77	2013	USD	2016	Physics	Sencore - 2013 USD – 2014 USD - 2015
78	2013	SDSMT	2017	Electrical Engineering	Sanford Lab – 2013, 2014
79	2014	Iowa State	2018	Mechanical Engineering	
80	2014	BHSU	2018	Env&Physical Science	
81	2014	Univ of Rochester (NY)	2018	Physics	
82	2014	SDSMT	2018	Biological Engineering	Nanofiber Tech - 2014
83	2014	Univ of Chicago (IL)	2018		
84	2014	SDSU	2018	Civil/Env Engineering	Vantage Point Systems - 2014
85	2014	Augustana	2018	Physics	Augustana – 2014, 2015
86	2014	SDSMT	2017	Physics	SDSMT - 2014 Fermilab - 2015
87	2014	Yale Univ (CT)	2018	Chemistry	SD BioTech – 2014 Yale Univ - 2015
88	2014	BHSU	2017	Env&Physical Science	USD Cubed - 2014

Table E: Tracking of Program Alumni - Current Undergraduates (continued)

Student	Program Year	College	Anticipated Graduation	Major	Recent Internships
89	2015	SDSMT	2018	Chemical Engineering	CalxAqua, LLC - 2015
90	2015	SDSMT	2018	Geological Engineering	
91	2015	SDSMT	2019	Computer Science	
92	2015	SDSMT	2019	Physics, Engineering	Adams Thermal - 2015
93	2015	SDSMT	2019	Physics	3M - 2015
94	2015	SDSU	2018	Mechanical Engineering	
95	2015	Northwestern (IL)	2019		
96	2015	Stanford (CA)	2019		
97	2015	Univ of Michigan	2019		Alumend - 2015

Communications Department

Constance Walter, Communications Director

Communications

Communications Director Constance Walter and Multimedia Specialist Matt Kapust are participating in the Deep Underground Neutrino Experiment (DUNE) Outreach and Communications group, which meets monthly.

The dedication of the Raymond Davis Jr. Memorial took place at the Visitor Center on August 26. More than 70 people attended the event. Speakers included Dr. John Wilkerson, MAJORANA; Dr. David Kieda, University of Utah; Mr. Dale Lamphere, South Dakota artist laureate; and Mr. Roger Davis, son of Dr. Ray Davis. SDSTA Executive Director Mr. Mike Headley emceed the event.

Connie attended the Cultural Advisory Committee meeting on August 31.

Connie and Matt are working with Black Hills State University (BHSU) on the new Jonas Science Building addition. Contributions include helping to develop a plaque honoring T. Denny Sanford, creating designs for Sanford Lab flags, choosing images for the walls, and submitting videos for the kiosk.

Matt is continuing to work with the Visitor Center on advertising placements.

The licensing agreement with the Visitor Center was finalized.

Community

Connie and E&O Education Specialist Bree Oatman distributed flyers on neutrinos, dark matter, and the underground laboratory and offered kids activities at the Lead Live event.

Media/Site Visits

National Public Radio's Radiolab reporters were on site July 14-15. The podcast can be found here:

<http://www.radiolab.org/story/elements/>.

Connie served as a guide during the LBNF/DUNE logistics tour.

Connie accompanied Roger Davis and his wife, Linda, on an underground and surface tour of Sanford Lab prior to the dedication ceremony.

Presentations

Connie gave three presentations to Roads Scholar groups—nearly 150 people. These groups include people from all over the United States.

Graphics, video and website

The Communications team continues to look at website redesign options and plans to update the site when the next version of our Content Management System is available.

Communications Specialist Adam Gomez is working on a time-lapse video for MJD.

Adam and Matt created the program for the Raymond Davis Jr. Memorial dedication.

Adam designed a flyer for the upcoming Chang Kee Jung presentation at Black Hills State University.

Matt and Adam took photographs and video of Dale Lamphere working on the Ray Davis tribute sculpture; Adam documented the installation.

Matt and Adam are working with the Environment, Health, and Safety Department to create a video with safety messages.

Photography highlights in August

- August 14: CASPAR Begins Moving In
- August 26: Dedication of the Raymond Davis Jr. Memorial (photos not available until September 11 when Matt returns from his vacation)

To view albums in the Sanford Lab Photo Gallery go to: <http://pics.sanfordlab.org/f216003594>

Miscellaneous

Matt continues to maintain cameras and manage files to create time-lapse videos of BHUC and CASPAR.

The Communications Department continues to develop stories for Deep Thoughts; update the website; perform general web maintenance; and provide photographs and information to the media, science collaborations and educational institutions, and other laboratory departments.

Upcoming

- Sep 17-18: Guest speaker Chang Kee Jung
- Sep 22: Community Presentation at Whitewood Library
- Sep 26: South Dakota Festival of Books in Deadwood; Speaking at Lions Club Regional Conference
- Oct 2: Governor's Policy Office Staff Underground Tour
- Oct 14-15: Connie to attend the Interactions Collaboration of particle physics communicators meeting at Brookhaven National Laboratory
- Nov 1-3: Presentation at the Indian Summit in Pierre
- Planning for new informational videos

News coverage

- Sep 3: [Scientists below the surface](#) by Lauren Biron, Symmetry Magazine
- Aug 31: [Fermilab planning to study neutrinos to understand more about universe](#) by Eric Schelkopf , Kane County Chronicle
- Aug 27: [Lead dedicates sculpture to scientist Dr. Ray Davis](#) by Staff Reports, KOTA Territory News
- Aug 27: [Davis Tribute Sculpture dedicated](#) by Jaci Conrad Pearson, Black Hills Pioneer
- Aug 26: [Sculpture dedicated to Dr. Ray Davis at the Sanford Lab Homestake Visitor Center](#) by Eliana Sheriff, KEVN Black Hills Fox
- Aug 22: [Davis tribute sculpture dedication Wednesday](#) by Staff Reports, Black Hills Pioneer
- Aug 21: [If we want to detect dark matter we might need a different approach](#) by TANN, University of Southern Denmark
- Aug 21: [Mines students complete summer internships](#) by Staff, KOTA Territory News
- Aug 20: [New theory—If we want to detect dark matter we might need a different approach](#) by Staff Writers, Phys.org
- Aug 19: [Black Hills State University ready for new school year](#) by Eliana Sheriff, KEVN Black Hills Fox
- Aug 14: [Underground geology with Tom Campbell](#) by Cara Hetland, South Dakota Public Broadcasting
- Aug 11: [Kingsland officials, teachers explore underground research lab](#) by Gretchen Mensink Lovejoy, Spring Valley Tribune
- Aug 11: [A Tale of Two Neutrino Labs](#) by Sen. Randy Hultgren, Medium
- Aug 7: [Mines' research funded by regents' grants could boost economy](#) by Emily Niebrugge , Rapid City Journal
- Aug 5: [Public University Research Grants Stimulate Economic Development](#) by staff reporters



Top left: CASPAR begins moving their experiment to its new home.

Center left: Facilities Technician Oren Loken assists the CASPAR researchers to suspend equipment for an accelerator.

Center right top: This is an aerial view of the Davis Tribute Sculpture while being fabricated.

Center right center: Dale Lamphere (at right) measures a support piece of the sculpture. Lamphere is the artist commissioned to build the sculpture.

Center right bottom: Executive Director Mike Headley answers questions during a workshop for LBNE/DUNE.



Business Services Department
Sharon Hemmingson, Business Services Manager
Contracts and Procurement

Sanford Underground Research Facility Operations (LBNL): SDSTA received Modification No. 32 to the Sanford Underground Research Facility Support subcontract, adding \$469,000 in supplemental funding for FY2015. The Lawrence Berkeley National Laboratory (LBNL) and Department of Energy (DOE) are currently reviewing the FY2016 continuation proposal.

Large Underground Xenon (LUX): The FY2016 continuation proposal was submitted to LBNL.

Long Baseline Neutrino Facility (LBNF): SDSTA received purchase orders from Fermilab to authorize Gilt Edge Study changes, Arup's participation in upcoming Risk Workshops, and changes to advance preliminary excavation design. SDSTA received four new Requests for Proposal to add tasks to the Excavation Preliminary Design and Building and Infrastructure purchase orders.

Requests For Proposal (RFP) and Contracts Status Report – AUGUST 2015			
Contractor / Vendor	Type	Project	Amount
Ruff Inc. #2015-06	CO#1	Add funds - Data retrieval from RS6000	\$650 (DOE)
CDM Smith #2015-04	CO#1	Extend contract through 9/30/2015	n/a (DOE)
Butler Cat #2015-17	3 year Contract	Annual generator inspections and on-call services (Surface & UG) – Year 1	\$14,810 (DOE)
D&W Crane #2014-14	CO#1	Year 2 renewal (10/1/15-9/30/16), new rates	n/a (DOE)
North Central Supply, Inc. #2015-18	3 year Contract	On-call service for doors, locks, gates & controls on surface & in UG locations – Year 1	\$5,000 (DOE)
James L. Whitlock #2014-20	CO#1Rev	Year 2 renewal (10/1/15-9/30/16), add funding	\$6,000 (DOE)
CVD Construction #2014-10 (General Services)	CO#4	Year 2 renewal (10/1/15-9/30/16) with revised rate sheet; increase funding	\$25,000 (DOE)
CDM Smith #2015-04	CO#2	Increase scope, costs	\$55,089 (DOE)
Galyn Rippentrop #2013-06	CO#5	Extend to 9/30/16, add funding	\$7,500 (DOE)
TSP Inc. #2015-20	Contract	Revit software training (NTE)	\$2,600 (DOE)
Jacobs Precision Welding #2014-13	CO#1	Year 2 renewal (10/1/15-9/30/16)	\$15,000 (DOE)
Insulation Enterprises, Inc. #2015-07	CO#2	Extend term to 12/31/15	n/a (DOE)
TSP Inc. #2015-20	Mod #1	Extend term to 10/31/15	n/a (DOE)
Dean Kurtz Construction #2013-45	CO#29	Shotcrete vacuuming in lieu of floor sealing	-\$1,723.62 (SAN)
Rapid City Regional #2015-11	Contract	Occupational Health Screening	\$7,500 (by project)
Ainsworth Benning Construction #2013-28 (SLHVC/CMAR)	CO#6	Add automatic door operators, box drain pipe & paint changes to scope; extend to 12/31/15	\$14,538.06 (SAN)
Dean Kurtz Construction #2013-45	CO#30	Add CASPAR floor level patching	\$450.39 (SAN)
Lowe Roofing, Inc. #2015-14	CO#1	Authorize/fund Administration Building emergency roof repair – NTE	\$10,000 (SAN)
Ainsworth Benning Construction #2013-28 (SLHVC/CMAR)	CO#7	Add drinking fountain and 2 hose bibs for Manuel Bros Park restroom * <i>to be reimbursed by City of Lead</i>	\$3,706.62 (SAN)*
Black Hills Pest Control #2015-15	Contract	Integrated pest management services	\$6,370 (by project)
SDSTA/SLHVC License Agreement	Agreement	Licensing agreement for images	n/a
Stone Land Services LLC #2015-03	CO#1	Extend term to 9/30/2016, add funding	\$1,500 (by project)
PENDING CVD Construction #2014-08	Contract	Yates Crusher Building Roof Structural Reinforcement (RFB award w/drawn Apr 2014)	(TBD - Indirect)
PENDING Dangermond Keane Architecture #2015-19	Contract	Long-Range Development Plan	(TBD)

Purchase Orders (POs): 177 POs were issued in August totaling **\$422,344**.

Warehouse Inventory: Warehouse inventory on August 31, 2015 totaled **\$212,025**.

Information Technology (IT)

The transition process to a new virtual machine (VM) architecture was successfully launched with the completion of the new switches and servers with help from Golden West.

CASPAR and Black Hills Underground Campus network, phone, and wireless gear were installed, and IT participated in a LBNF/Deep Underground Neutrino Experiment (DUNE) workshop to prepare for cyberinfrastructure needs.

The Trip Action Plan, Precipitation, and Action Tracking databases were modified to better meet user needs. IT is working with EHS and Communications to initiate training modules on the Sanford Lab website, and a new blog was initiated to share information and to address common user questions and training topics.

IT continues to review Meru Wireless, Xymon Network, and VPN Remote Access logs daily, and establishes new VPN and DocuShare accounts for individuals and user groups as needed.

User Support Office (USO)

For the month of August, logistical and administrative support were provided for the following:

- Aug 10: General Safety Basics; FSCF Design Requirements Meeting
- Aug 11: LZ Meeting (*Gilchriese*)
- Aug 11-13: LBNF Logistics Planning Workshop, Underground Tour (*Headley*)
- Aug 20, 21 & 28: Annual Refresher Training
- Aug 21: General Safety Basics
- Aug 26: Monthly Safety Committee Meeting; Davis Tribute Ceremony (*9am at Visitor Center*)
- Aug 27: Governor's Council of Economic Advisors Presentation and Tour (*Headley/Walter*)
- Aug 28: SURF All Hands Meeting
- Aug 31: Cultural Advisory Committee Meeting (*Russell*)

Preparation and planning continue for upcoming meetings and events to be held at Sanford Lab:

- Sep 9: Safety Committee Meeting
- Sep 14: General Safety Basics Training
- Sep 17: SDSTA Board of Directors Meeting
- Sep 21: ManagerPlus Webinar
- Sep 25: School Event for the South Dakota Festival of the Books (*Norris*)
- Sep 28-30: Underground Access Department Review
- Oct 2: Governor's Policy Staff Underground Tour (*Headley*)
- Oct 2, 14 & 16: School Field Trips to Sanford Lab (*Norris*)
- Oct 8: South Dakota Office of Homeland Security Staff Underground Tour (*Schroeder*)
- Oct 13-15: LZ EHS & Infrastructure Reviews
- Oct 27-29: LBNF CD-3A Directors Review
- Dec 2-4: LBNF CD-3A DOE Review
- Dec 4: SURF All Hands Meeting (*tentative*)
- Dec 17: SDSTA Board of Directors Meeting

Monthly reports for LBNL and SDSTA were compiled, edited and distributed. Month-end reception registers were forwarded to the FBI/Homeland Security/South Dakota Fusion Center.

Monthly Researcher hours were tracked and Science training records processed. Monthly invoices were coded for the Finance Department. Telephone lists were updated. Safety messages and other important news continue to be updated on a daily basis on digital displays throughout facility. DocuShare collections continue to be organized and archived as needed. Mandy continues to assist the Communications Department with copyediting and updating content on the Sanford Laboratory website, as needed.

Work also continues on updating the SDSTA policies and procedures. Dr. Robert Wilson has been appointed to the SDSTA Board and Mr. Thomas C. Adam has retired. The Boards and Commissions portal, along with the Sanford Lab website, will be updated in September to reflect this change.

Finance and Human Resources Department
Nancy Geary, Chief Financial Officer and Department Manager

Included in the Financial Report are the following:

- DOE SDSTA FY2015 SPA Curve as of August 2015
- Balance Sheet as of August 31, 2015
- Comprehensive Statement of Income August 2015
- Comparative Balance Sheet – August 2015 vs. August 2014
- Comparative Statement of Income – August 2015 vs. August 2014
- Available Cash as of August 2015
- Operating Budget Summary
- CAPEX Budget Summary
- August 2015 and YTD CAPEX Budget – actual vs. budget
- SDSTA Staffing Plan by Funding Source as of August 2015

Department of Energy (DOE) SDSTA FY2015 Scheduled Performed Actual (SPA) Curve

This graph represents an analysis of the DOE Subcontract No. 6994297 Operations scheduled funding compared to actual. The report shows funding through September 2015 along with information related to Funded-to-Date dollars, Scheduled dollars, Performed dollars, and Actual dollars by month. Actual dollars represent actual invoices for the months sent to Lawrence Berkeley National Laboratory (LBNL) for reimbursement. For August, the invoices totaled \$1,185,125, which is lower than the anticipated reimbursements of \$1,358,757 by \$173,632. Since the inception of this subcontract in February 2012, the actual expenses are at \$48,105,430 which is lower than the budget of \$48,324,907 by \$219,477. As for FY2015, we are over budget by \$251,221.

Balance Sheet Items

Cash in Local Checking – Total on hand at August 31, 2015 was \$1,697,817; up from last month by \$1,074,843. Funds on hand were necessary to pay employee medical/life/vision insurance all due September 1, 2015. The high balance also contains funds from LBNL received late in August.

Cash with State Treasurer –Total balance of \$15,099,739. This has decreased from last month by \$2,855,498. This reduction is a combination of receiving the interest proration from fiscal year 2015 at \$328,073, drawing down funds for August payables at \$683,571, and transferring \$2,500,000 to the Captive Insurance Company created through the State of South Dakota. House Bill (HB) No. 1186 from the 2015 Legislative Session authorized this transfer from the SDSTA's Indemnification Fund to the Captive to provide initial capital and pay expenses.

Billed Accounts Receivable (A/R) – Billed A/R represents any open invoices based on contracts from sources such as LBNL, Fermilab, other smaller contracts from other universities, and Barrick/Homestake Mining Company. Total is at \$2,175,425; down from last month by \$526,320. Included in the balance are open invoices to LBNL for \$1,234,365; representing invoices for the Large Underground Xenon (LUX) subcontract, LUX-ZEPLIN (LZ) engineering support, and invoices for the Operations subcontract No. 6994297. Additional open invoices include \$896,350 from Fermilab, \$3,250 from various other smaller university subcontracts, as well as open invoices from Barrick equaling \$40,954. Additionally there are open invoices for \$507 from Xilinx, Inc. Xilinx, Inc. is a commercial organization (rather than a university) that has established an experiment located near the 4850L at the Davis Campus. SDSTA is charging them for lab space, experiment access fees, and Sanford Lab scientific support.

Unbilled A/R – Balance of \$41,656. Unbilled A/R represents items that have not been billed on various contracts. The payroll from pay end date August 28, 2015 (paid to employees September 4, 2015) was not invoiced in August on various contracts. This amount will be invoiced in September. August's balance has decreased by \$304,022.

Other A/R – Current balance of \$304,134. This balance represents any Interest Receivable and Miscellaneous Accounts Receivable. The balance decreased by \$105,107 which is a result of receiving our fiscal year 2015 interest, plus the interest accrual for August, and activity for noncontract receivables.

Inventory/Supplies – Balance at \$2,616,992 for fixed assets being stored but not in service. The balance is unchanged from July.

Inventory Warehouse/Personal Protective Equipment (PPE) – Current balance of \$369,104. This balance represents the warehouse inventory that was purchased by SDSTA prior to federal funding and xenon gas inventory for experiment use. This balance is unchanged from July.

Other Current Assets – This listing on the balance sheet represents the balances of both prepaid insurance – \$210,690 and prepaid other – \$37,826. Total balance of \$248,516 is down from last month by \$67,086. This decrease represents the monthly insurance expense along with expensing various prepaid items in August. Monthly insurance expenses were stable at \$45,538 including worker's compensation.

Fixed Assets – Total of \$86,842,528 (net of depreciation through August 31, 2015). Fixed assets (prior to depreciation) increased for the capitalization of a 4-Bay Switchgear set for \$81,000. Including depreciation for August, the net decrease for fixed assets is \$145,225.

Other Assets/Work in Progress – This balance represents the current fiscal year progress being made using Sanford/SDSTA Funds to support the budgeted projects on the CAPEX budget less any items that are being capitalized within the Fixed Asset designation. Current balance has increased by \$984,258 to 2,277,955. The balance represents the current year's project costs (not including personnel) funded by these sources.

Other Assets/Capital Lease – This balance of \$492,450 represents the deep pump system capital lease. The balance has decreased by \$14,560. The lease through AmWest, Inc. was renegotiated to include transference of property to SDSTA at the end of the lease term in January 2018. The rental payments are being directly charged to the LBNL federal subcontract. Per the subcontract, the pumping system will become the property of the federal government at the end of the lease period. The equipment will be fully expensed over the period of the lease at which time it will be removed (along with the lease liability) from the SDSTA's balance sheet.

Pension Deferred Outflows – This is a new designation on our Balance Sheet to reflect the requirements related to the Governmental Accounting Standards Board (GASB) 68 and 71 in reference to pensions. The SDSTA is required to report the net pension asset or liability on the face of our financials along with related deferred inflows and outflows. The Net Pension Asset is a restricted asset. Thus, the equity created would also be restricted (restricted for pension benefits). The balance shown as a noncurrent asset is \$7,176,478 created by fiscal year 2015 final entries.

Captive Indemnification – This is a new account classification to reflect the transfer of funds from our Cash held with the State to the Captive Insurance Company. The balance of \$2,500,000 as discussed earlier under (Cash with State Treasure) was authorized by HB No. 1186 from the 2015 Legislative Session.

Total Assets – Total of \$121,842,794. This is up from last month by \$7,717,761; which represents the net activity as listed above.

Accounts Payable – Our Accounts Payable balance of \$2,376,010 (including Accounts Payable and Accounts Payable Accrual) at the end of the month compared to last month has increased by \$596,526. This increase is primarily due to owing more to an engineering subcontractor (Arup) for the Long Baseline Neutrino Facility project.

Accrued Payroll Liabilities – Current balance of \$1,050,453 has decreased by \$43,575 from last month. This represents the net change between earned vacation and vacation taken and other changes in other employee benefit related liabilities. This month's accrual also includes a labor accrual for labor performed in August, but not paid to employees until September.

Long Term Accrued Employee Benefit/Lease – This balance of \$492,450 denotes the liability associated with the capital lease for the deep pump system from AmWest, Inc. This balance has decreased by \$14,560 for the months' reduction in the lease amount owed.

Pension Deferred Inflows – This is a new classification to reflect the requirements of GASB 68 and 71, as discussed earlier. The balance of \$4,412,373 represents the net difference between projected and actual investment earnings on our pension plan with the South Dakota Retirement System (SDRS).

Total Liabilities – Total Liabilities increased by \$4,950,764 (from \$3,380,521 to \$8,331,285), which reflects the net activity listed above.

Total Equity – Increase to \$113,511,509 from the previous month \$110,744,512.

Total Liabilities & Equity – Increase to \$121,842,794 from the previous month of \$114,125,033.

Statement of Income Items

On the SDSTA's Statement of Income, the DOE Subcontracts are consolidated into one line item on the report. Included in this amount are various subcontracts from LBNL, Fermi National Accelerator Laboratory (FNAL or Fermilab), as well as a small contract for the MAJORANA project with the University of North Carolina. Total revenue for this fiscal year through August 2015 is \$3,268,623 (increase from July of \$2,065,215).

National Science Foundation (NSF) Subcontracts – SDSTA still has a small contract open through the University of Minnesota funded by NSF. July and August did not include a billing to this contract.

State Revenue – Year-to-date State Revenue equals \$14,752. Funding has been received from Black Hills State University (BHSU) in the amount of \$5,840 for the clean room-related expenses in their underground campus. The balance also includes a small amount of funding (\$912) from the University of South Dakota state research funds for the Center for Ultra-Low Background Experiments in the Dakotas (CUBED) as well as \$8,000 from the South Dakota Experimental Program to Stimulate Competitive Research (EPSCoR) to fund Davis Bahcall scholars work experience internships from this past summer.

Contributions & Donations – Fund raising activities include the receipt of \$125,000 from the Great Plains Education Foundation in support of education efforts at Sanford Lab.

Interest income recorded for the current fiscal year on State Funds is at \$20,455. This represents interest accruing at 0.75% on the cash held by the state on behalf of the SDSTA.

Direct Costs are then listed on the Statement of Income. The categories are listed to reflect the format used when invoicing on federal contracts. The classifications for Unallowable Costs and Indirect Costs are listed as well on this report to follow the federal contracting format. Direct Costs/Unallowable Costs are at \$3,061,818 for the year. Indirect Costs including fringe benefits are at \$1,010,032. Other Income for the month of August is at \$96,557 which represents miscellaneous income received from Xilinx (a private company) discussed earlier, and small amounts for water treated and electric usage for Barrick.

Net Loss for the year is at \$340,803.

Comparative Balance Sheet

Significant differences include Total Cash with State Treasurer which is lower by \$12,690,586 from this time last year as funds were expended over the 12-month period. This reduction in cash also includes the transfer of \$2,500,000 to the Captive Insurance. Billed A/R is higher than this time last year by \$837,839 primarily due to increases in the total unpaid receivables from Fermilab and LBNL. Other notable differences exist for changes in Fixed Assets which have increased by \$14,291,330 primarily due to the year-end capitalization of fixed assets for FY2015. Work in Progress has increased from this time last year by \$1,040,095 represented by an increase in activity in our CAPEX projects when comparing the two time frames. Increases of \$7,176,478 and \$2,500,000 are a result of the two new designations – Pension Deferred Outflows and Captive Indemnification, respectively. In summary, Total Assets have increased by \$13,570,477. Total Current Liabilities have increased by \$1,222,654 from this time last year, primarily due to increased accounts payable for open invoices to various subcontractors as well as an increase in accrued payroll liabilities. Total Other Liabilities have increased by \$4,297,239 primarily because of the new designation for Pension Deferred Inflows. Total Equity has increased by \$8,050,584 from this time last year. Even though Restricted Funds have decreased, the Investment in General Fixed Assets has increased for the capitalization of projects from FY2015. In summary, Total Liabilities & Equity have increased by \$13,570,477.

Comparative Profit/Loss

Total Revenue for year-to-date August 2015 compared to year-to-date August 2014 has increased by \$541,794. DOE subcontract revenue has increased by 39%. Contributions & Donations are lower when comparing the two time frames. Interest Income is lower for year-to-date August 2015 due to a lower cash balance with the State compared to last year. Direct Costs and Indirect Costs for year-to-date August 2015 compared to this time last year show a combined increase of \$969,700 (31% increase), primarily due to increased contractual services for the Long Baseline Neutrino Facility (LBNF) project. Net Income for the comparative time periods shows a decrease of \$440,976 which reflects the net activity as listed above.

Available Cash

This report reflects our available cash after noting the restricted cash balances in the Indemnification and Mine Closure accounts. The Sanford Gift No. 2 account is no longer designated as “restricted” in the same sense as the Indemnification and Mine Closure accounts due to the signing of the Fourth Amendment to the Homestake Gift Agreement. After our liabilities are noted, \$3,999,888 is available to be used for a limited scope of SDSTA expenses (Board, Administration, Communication, Education & Outreach, Science Liaison, and Sanford Visitor Center Director expenses not covered by the current DOE funding), for current contracts related to the various capital expenditure projects including the Ross Shaft Rehabilitation, and towards the specific educational projects listed in the Fourth Amendment.

Operating Budget Analysis

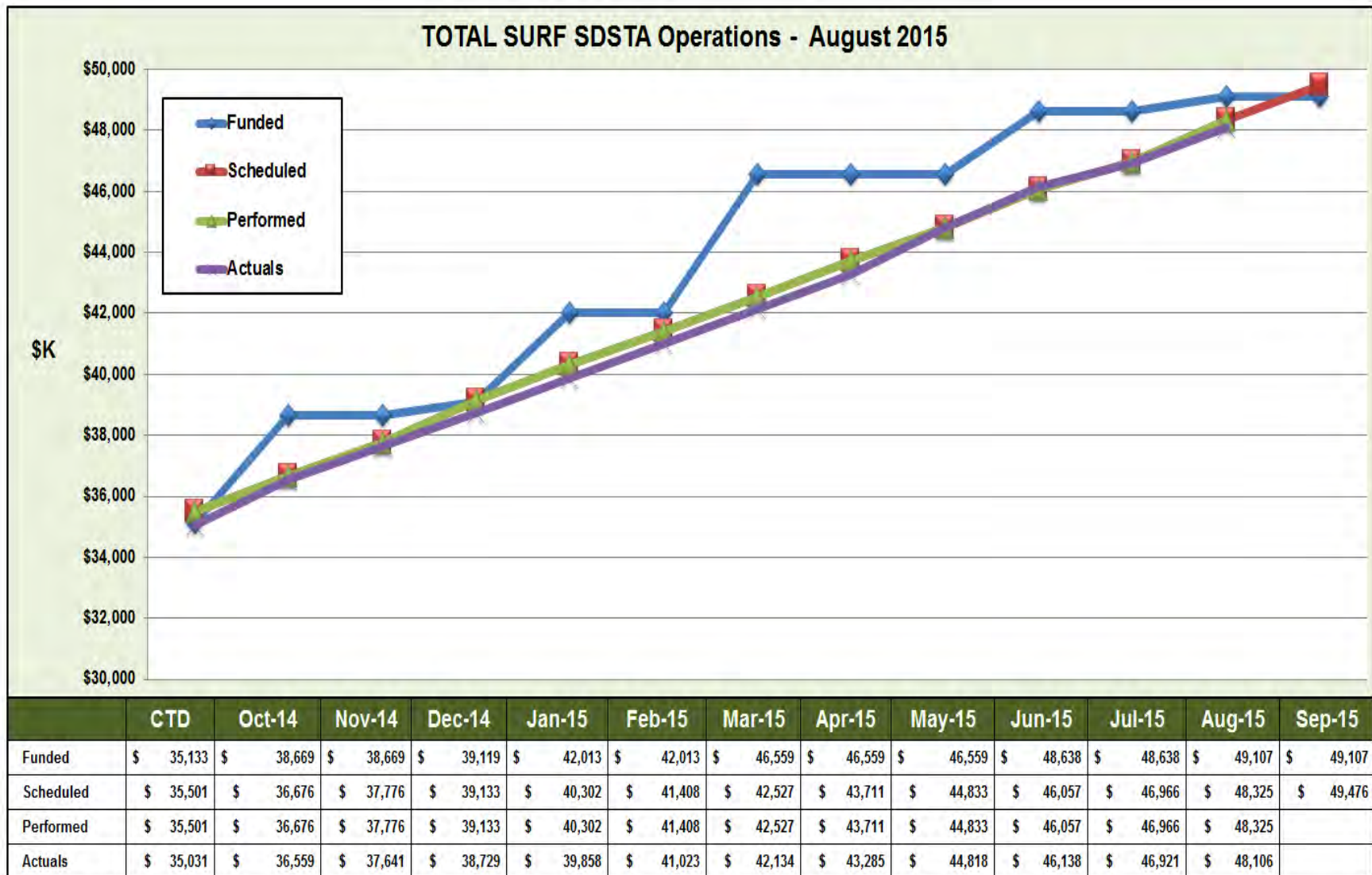
This report is separated into three sections: SDSTA-funded activities, Federal & State funded activities, and Indirect expenses that benefit various activities. A few areas are over budget for the month, but by insignificant amounts. Total operating expenses are under budget for August 2015 by \$535,734, primarily due to lower expenses in two of the Fermilab contracts. Year-to-date figures are almost all under budget for a total under run of \$1,820,367.

Capital Expenditure Budget Analysis

Our current capital expenditure projects have been condensed and are listed from CAP2012-27 - CAP2016-03 with various breaks in the numbering sequence. Total project dollars are at \$12,215,257, which represents the approved budget from the June 2015 Board meeting. All projects with the exception of the LZ Surface Facility Upgrades and LZ Xenon Gas Purchase are funded by the balance of Sanford Funds as directed by the Fourth Amendment to the Homestake Gift Agreement, funding from private fund raising activities, a small amount from BHSU, and SDSTA funds including interest. Funding for CAP2012-27 Ross Shaft Rehabilitation will be funded through Fermi Research Alliance and the DOE in late December 2015. In August 2015, SDSTA spent \$1,194,051, on our CAPEX projects out of the budgeted \$1,231,625. Year-to-date SDSTA has expended \$2,631,615 on this list of projects.

Human Resources

Currently, SDSTA has 126 full time employees and 17 temporary staff, primarily Emergency Response Team members. Mr. Walter Weinig has been selected as the new Laboratory Director to oversee day-to-day operations of Sanford Lab. He will begin employment on October 5. As for the recently posted Research Scientist position, interviews are in process. A Mechanical Engineer position was recently posted and various applicants are being considered with interviews to follow.



**DOE SDSTA FY 2015 SPA Curve
August 2015**

DIVISION: ALL

BALANCE SHEET

ASSETS

AS OF
08/31/15

CURRENT ASSETS

First Interstate Checking	\$	1,668,735.76
First Interstate Other		29,081.27

Total in Local Checking		1,697,817.03
SD Treas: Indemnification		7,617,868.59
SD Treas: Insurance		0.01
SD Treas: Mine Closure		1,378,755.95
SD Treas: Operating		41,204.29
SD Treas: Sanford		1,212,764.30
SD Treas: Sanford Gift #2		3,106,530.44
SD Treas: SB196 Transfer		1,742,615.57

Total with SD Treasurer		15,099,739.15
Billed A/R		2,175,425.43
Unbilled A/R		41,656.30
Other A/R		304,134.14
Inventory - Supplies		2,616,992.22
Inventory - Warehouse		369,104.49
Other Current Assets		248,515.62

Total Current Assets		22,553,384.38

FIXED ASSETS

Land, Underground & Other		12,398,635.03
Bldgs & Infrastructure		8,881,327.62
Improvements		64,569,774.83
Computer Equipment		451,472.54
Equipment & Fixtures		10,052,148.82
Accum Depr & Amort		(9,510,831.14)

Total Fixed Assets		86,842,527.70

OTHER ASSETS

Work in Process		2,277,954.56
Equipment - Capital Lease		492,449.69
Pension Deferred Outflows		7,176,478.00
Captive Indemnification		2,500,000.00

Total Other Assets		12,446,882.25

TOTAL ASSETS

=====

\$ 121,842,794.33

=====

DIVISION: ALL

BALANCE SHEET

LIABILITIES & EQUITY

AS OF
08/31/15

CURRENT LIABILITIES

Accounts Payable	\$	2,284,582.81
Other Payables		91,427.32

Total Accounts Payable		2,376,010.13
Accrued Payroll Liab		1,050,452.54

Total Current Liabilities		3,426,462.67

OTHER LIABILITIES

LT Accrued EB/Lease		492,449.69
Pension Deferred Inflows		4,412,373.00

Total Other Liabilities		4,904,822.69

STOCKHOLDER'S EQUITY

Restricted: Indemnificati		7,500,000.00
Restricted: Captive		2,500,000.00
Restricted: Sanford I.Lab		2,897,391.48
Restricted: Mine Closure		1,378,755.95
Restricted: Sanford Gift2		2,979,083.00
Restricted: Pension		2,045,761.00

Total Restricted Funds		19,300,991.43
Investment in Gen FA		86,923,527.70
Unrestricted Funds		7,286,989.84

Total Equity		113,511,508.97

TOTAL LIABILITIES & EQUITY

=====

\$ 121,842,794.33

=====

ALL

STATEMENT OF INCOME

FOR THE PERIOD ENDING 08/31/15

	YR-TO-DATE
REVENUE	
DOE Subcontracts	\$ 3,268,622.73
State Revenue	14,751.57
Contributions & Donations	125,000.00
Checking Interest	19.25
Interest Income	20,454.50

TOTAL REVENUE	3,428,848.05
DIRECT COSTS	
Direct Labor	1,191,403.35
ERT Labor	4,517.64
Board of Directors	639.89
Contractual Svcs	1,163,953.85
Inventory	57,288.62
Supplies	120,011.65
Travel - Domestic	20,593.89
Travel - Foreign	26,585.95
Utilities	365,506.86
Other Direct Costs	42,738.15
Unallow/Unbill Costs	68,578.28

TOTAL DIRECT COSTS	3,061,818.13
INDIRECT COSTS	
Fringe Benefits	483,003.09
Overhead	527,028.48

TOTAL INDIRECT COSTS	1,010,031.57

GROSS PROFIT FROM OPERATIONS	(643,001.65)

OTHER INCOME	
Water Treatment	72,789.06
Miscellaneous Income	23,203.80
Other Operating Income	563.90

TOTAL OTHER INCOME	96,556.76
OTHER EXPENSES	
Loss(Gain) on Sale of FA	1,904.54
Reclass Incr Net Assets	(207,546.78)

TOTAL OTHER EXPENSES	(205,642.24)
	=====
NET INCOME/LOSS ()	(340,802.65)
	=====

DIVISION: ALL

COMPARATIVE BALANCE SHEET

ASSETS

	AS OF 08/31/15	AS OF 08/31/14	\$ CHANGE	% CHANGE
CURRENT ASSETS				
First Interstate Checking	\$ 1,668,735.76	\$ 648,692.05	\$ 1,020,043.71	157.25%
First Interstate Other	29,081.27	531,529.71	(502,448.44)	-94.53%
	-----	-----	-----	-----
Total in Local Checking	1,697,817.03	1,180,221.76	517,595.27	43.86%
SD Treas: Indemnification	7,617,868.59	10,134,549.12	(2,516,680.53)	-24.83%
SD Treas: Insurance	0.01	3.71	(3.70)	-99.73%
SD Treas: Mine Closure	1,378,755.95	1,367,000.31	11,755.64	0.86%
SD Treas: Operating	41,204.29	5,535.53	35,668.76	644.36%
SD Treas: Sanford	1,212,764.30	2,896,023.19	(1,683,258.89)	-58.12%
SD Treas: Sanford Gift #2	3,106,530.44	13,387,210.27	(10,280,679.83)	-76.79%
SD Treas: SB196 Transfer	1,742,615.57	3.11	1,742,612.46	56032554.98%
	-----	-----	-----	-----
Total with SD Treasurer	15,099,739.15	27,790,325.24	(12,690,586.09)	-45.67%
Billed A/R	2,175,425.43	1,337,586.53	837,838.90	62.64%
Unbilled A/R	41,656.30	25,418.65	16,237.65	63.88%
Other A/R	304,134.14	137,354.16	166,779.98	121.42%
Inventory - Supplies	2,616,992.22	2,575,749.36	41,242.86	1.60%
Inventory - Warehouse	369,104.49	370,026.47	(921.98)	-0.25%
Other Current Assets	248,515.62	458,994.17	(210,478.55)	-45.86%
	-----	-----	-----	-----
Total Current Assets	22,553,384.38	33,875,676.34	(11,322,291.96)	-33.42%
FIXED ASSETS				
Land, Underground & Other	12,398,635.03	12,353,375.03	45,260.00	0.37%
Bldgs & Infrastructure	8,881,327.62	8,881,327.62	-	0.00%
Improvements	64,569,774.83	49,299,966.62	15,269,808.21	30.97%
Computer Equipment	451,472.54	362,464.95	89,007.59	24.56%
Equipment & Fixtures	10,052,148.82	9,234,741.03	817,407.79	8.85%
Accum Depr & Amort	(9,510,831.14)	(7,580,677.46)	(1,930,153.68)	25.46%
	-----	-----	-----	-----
Total Fixed Assets	86,842,527.70	72,551,197.79	14,291,329.91	19.70%
OTHER ASSETS				
Work in Process	2,277,954.56	1,237,859.50	1,040,095.06	84.02%
Equipment - Capital Lease	492,449.69	607,583.98	(115,134.29)	-18.95%
Pension Deferred Outflows	7,176,478.00	-	7,176,478.00	100.00%
Captive Indemnification	2,500,000.00	-	2,500,000.00	100.00%
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Total Other Assets	12,446,882.25	1,845,443.48	10,601,438.77	574.47%
TOTAL ASSETS				
	=====	=====	=====	=====
	\$ 121,842,794.33	\$ 108,272,317.61	\$ 13,570,476.72	12.53%
	=====	=====	=====	=====

DIVISION: ALL

COMPARATIVE BALANCE SHEET

LIABILITIES & EQUITY

	AS OF 08/31/15	AS OF 08/31/14	\$ CHANGE	% CHANGE
CURRENT LIABILITIES				
Accounts Payable	\$ 2,284,582.81	\$ 1,246,748.68	\$ 1,037,834.13	83.24%
Other Payables	91,427.32	16,247.58	75,179.74	462.71%
	-----	-----	-----	-----
Total Accounts Payable	2,376,010.13	1,262,996.26	1,113,013.87	88.12%
Accrued Payroll Liab	1,050,452.54	940,812.27	109,640.27	11.65%
	-----	-----	-----	-----
Total Current Liabilities	3,426,462.67	2,203,808.53	1,222,654.14	55.48%
OTHER LIABILITIES				
LT Accrued EB/Lease	492,449.69	607,583.98	(115,134.29)	-18.95%
Pension Deferred Inflows	4,412,373.00	-	4,412,373.00	100.00%
	-----	-----	-----	-----
Total Other Liabilities	4,904,822.69	607,583.98	4,297,238.71	707.27%
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TOTAL LIABILITIES	8,331,285.36	2,811,392.51	5,519,892.85	196.34%
STOCKHOLDER'S EQUITY				
Restricted: Indemnificati	7,500,000.00	10,000,000.00	(2,500,000.00)	-25.00%
Restricted: Captive	2,500,000.00	-	2,500,000.00	100.00%
Restricted: Sanford I.Lab	2,897,391.48	9,262,521.00	(6,365,129.52)	-68.72%
Restricted: Mine Closure	1,378,755.95	1,367,000.31	11,755.64	0.86%
Restricted: Sanford Gift2	2,979,083.00	5,651,945.00	(2,672,862.00)	-47.29%
Restricted: Pension	2,045,761.00	-	2,045,761.00	100.00%
	-----	-----	-----	-----
Total Restricted Funds	19,300,991.43	26,281,466.31	(6,980,474.88)	-26.56%
Investment in Gen FA	86,923,527.70	72,551,197.79	14,372,329.91	19.81%
Unrestricted Funds	7,286,989.84	6,628,261.00	658,728.84	9.94%
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TOTAL EQUITY	113,511,508.97	105,460,925.10	8,050,583.87	7.63%
	=====	=====	=====	=====
TOTAL LIABILITIES & EQUITY	\$ 121,842,794.33	\$ 108,272,317.61	\$ 13,570,476.72	12.53%
	=====	=====	=====	=====

COMPARATIVE STATEMENT OF INCOME

FOR THE PERIOD ENDING 08/31/15

	YEAR TO DATE	PRIOR YEAR TO DATE	\$ CHANGE	% CHANGE
REVENUE				
DOE Subcontracts	\$ 3,268,622.73	\$ 2,351,972.39	\$ 916,650.34	38.97%
State Revenue	14,751.57	411.49	14,340.08	3484.92%
Contributions & Donations	125,000.00	500,000.00	(375,000.00)	-75.00%
Checking Interest	19.25	11.36	7.89	69.45%
Interest Income	20,454.50	34,658.99	(14,204.49)	-40.98%
TOTAL REVENUE	3,428,848.05	2,887,054.23	541,793.82	18.77%
DIRECT COSTS				
Direct Labor	1,191,403.35	1,218,376.07	(26,972.72)	-2.21%
ERT Labor	4,517.64	4,765.50	(247.86)	-5.20%
Board of Directors	639.89	34.52	605.37	1753.68%
Contractual Svcs	1,163,953.85	350,179.27	813,774.58	232.39%
Emergency Resp	-	189.64	(189.64)	-100.00%
Inventory	57,288.62	35,407.26	21,881.36	61.80%
Supplies	120,011.65	69,215.86	50,795.79	73.39%
Travel - Domestic	20,593.89	12,369.68	8,224.21	66.49%
Travel - Foreign	26,585.95	21,104.19	5,481.76	25.97%
Utilities	365,506.86	276,631.94	88,874.92	32.13%
Other Direct Costs	42,738.15	43,412.37	(674.22)	-1.55%
Unallow/Unbill Costs	68,578.28	68,441.29	136.99	0.20%
TOTAL DIRECT COSTS	3,061,818.13	2,100,127.59	961,690.54	45.79%
INDIRECT COSTS				
Fringe Benefits	483,003.09	447,150.58	35,852.51	8.02%
Overhead	527,028.48	554,870.95	(27,842.47)	-5.02%
TOTAL INDIRECT COSTS	1,010,031.57	1,002,021.53	8,010.04	0.80%
GROSS PROFIT	(643,001.65)	(215,094.89)	(427,906.76)	198.94%
OTHER INCOME				
Water Treatment	72,789.06	59,414.82	13,374.24	22.51%
Miscellaneous Income	23,203.80	11,797.40	11,406.40	96.69%
Other Operating Income	563.90	-	563.90	100.00%
TOTAL OTHER INCOME	96,556.76	71,212.22	25,344.54	35.59%
OTHER EXPENSES				
Loss(Gain) on Sale of FA	1,904.54	-	1,904.54	100.00%
Reclass Incr Net Assets	(207,546.78)	(244,055.66)	36,508.88	-14.96%
TOTAL OTHER EXPENSES	(205,642.24)	(244,055.66)	38,413.42	-15.74%
NET INCOME/LOSS ()	\$ (340,802.65)	\$ 100,172.99	\$ (440,975.64)	-440.21%

South Dakota Science & Technology Authority
Available Cash
8/31/2015

Cash Total Checking/Savings	\$ 1,697,817.00
Cash With State Treasurer	<u>\$ 15,099,739.00</u>
Total Cash	\$ 16,797,556.00
Less: Restricted Funds	
Indemnification & Mine Closure	<u>\$ (8,878,756.00)</u>
Total Cash (Not Restricted)	\$ 7,918,800.00
Less: Total Liabilities w/out Pension Def. Inflows	<u>\$ (3,918,912.00)</u>
Available Cash	<u><u>\$ 3,999,888.00</u></u>

SDSTA Operating Budget Summary FY2016

Actual vs Budget

Aug. 2015 & YTD

	August 2015	Budget	\$ Over/Under Budget	% of Budget	Actual YTD	YTD Budget	\$ Over/Under Budget	% of Budget	% Remaining
									100%
SDSTA (Authority) Direct Charges									
Board of Directors	\$18,078.00	\$19,517.00	\$1,439.00	92.63%	\$36,357.00	\$39,034.00	\$2,677.00	93.14%	6.86%
Executive Office	\$16,178.00	\$15,576.00	-\$602.00	103.87%	\$26,469.00	\$31,622.00	\$5,153.00	83.70%	16.30%
Communications	\$10,889.00	\$15,871.00	\$4,982.00	68.61%	\$21,551.00	\$33,080.00	\$11,529.00	65.15%	34.85%
Science Center E & O	-\$215.00	\$0.00	\$215.00	100.0%	\$23,986.00	\$25,749.00	\$1,763.00	93.15%	6.85%
Science Liaison	-\$900.00	\$373.00	\$1,273.00	-241.29%	\$97.00	\$746.00	\$649.00	13.00%	87.00%
Sanf.L.Visitor C. (Director)	\$6,629.00	\$6,131.00	-\$498.00	108.12%	\$10,607.00	\$12,846.00	\$2,239.00	100.00%	0.00%
Subtotal	\$50,659.00	\$57,468.00	\$6,809.00	88.15%	\$119,067.00	\$143,077.00	\$24,010.00	83.22%	16.78%
Federal/State Funding - Direct Charges									
Fermi P.O.#618228 Staff Services	\$54,266.00	\$29,195.00	-\$25,071.00	185.87%	\$85,261.00	\$61,168.00	-\$24,093.00	139.39%	-39.39%
Fermi P.O.#618741 Excav.Des.	\$216,156.00	\$385,945.00	\$169,789.00	56.01%	\$216,156.00	\$771,890.00	\$555,734.00	28.00%	72.00%
Fermi P.O.#620223 Building/Infra.	\$554,942.00	\$758,226.00	\$203,284.00	73.19%	\$554,942.00	\$1,516,452.00	\$961,510.00	36.59%	63.41%
Fermi P.O.#622034 WasteRockSt.	\$5,525.00	\$15,700.00	\$10,175.00	35.19%	\$14,593.00	\$46,800.00	\$32,207.00	31.18%	68.82%
LBNL LUX C#6973786	\$11,038.00	\$13,350.00	\$2,312.00	82.68%	\$20,679.00	\$29,133.00	\$8,454.00	70.98%	29.02%
LBNL Operations C#6994297	\$951,012.00	\$1,089,805.00	\$138,793.00	87.26%	\$1,580,239.00	\$1,820,195.00	\$239,956.00	86.82%	13.18%
LBNL LUX/Zeplin C#7093667	\$13,436.00	\$14,322.00	\$886.00	93.81%	\$21,229.00	\$29,764.00	\$8,535.00	71.32%	28.68%
MJD (Majorana) # 5-4473	\$1,869.00	\$2,000.00	\$131.00	93.45%	\$3,909.00	\$4,000.00	\$91.00	97.73%	2.28%
CUBED - USD	\$11.00	\$500.00	\$489.00	2.2%	\$730.00	\$1,000.00	\$270.00	73.00%	27.00%
Sanf.Sci.Ed.Center - GOED Funded	\$78,857.00	\$25,000.00	-\$53,857.00	315.43%	\$78,857.00	\$50,000.00	-\$28,857.00	157.71%	-57.71%
U. of Minn. DUGL#A003778902	\$0.00	\$0.00	\$0.00	0.0%	\$0.00	\$1,000.00	\$1,000.00	0.00%	100.00%
* Xilinx, Inc. P.O.#729923	\$203.00	\$570.00	\$367.00	35.61%	\$405.00	\$1,140.00	\$735.00	35.53%	64.47%
Subtotal	\$1,887,315.00	\$2,334,613.00	\$447,298.00	80.84%	\$2,577,000.00	\$4,332,542.00	\$1,755,542.00	59.48%	40.52%
Indirect Expenses									
Indirect Charges Personnel	\$87,247.00	\$89,145.00	\$1,898.00	97.87%	\$180,203.00	\$182,238.00	\$2,035.00	98.88%	1.12%
Indirect Charges Other	\$187,706.00	\$267,435.00	\$79,729.00	70.19%	\$394,154.00	\$432,934.00	\$38,780.00	91.04%	8.96%
Subtotal	\$274,953.00	\$356,580.00	\$81,627.00	77.11%	\$574,357.00	\$615,172.00	\$40,815.00	93.37%	6.63%
Totals	\$2,212,927.00	\$2,748,661.00	\$535,734.00	80.51%	\$3,270,424.00	\$5,090,791.00	\$1,820,367.00	64.24%	35.76%

* Private Corporation (Commercial Group)

SDSTA CAPEX Budget Summary FY15/16
Actual vs Budget
August 2015 & YTD

<u>Budget Area</u>	<u>Actual Month</u>	<u>FY2015 Monthly Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>Actual YTD</u>	<u>FY2015 YTD Budget</u>	<u>\$ Over/Under Budget</u>	<u>% of Budget</u>	<u>% Remaining</u>
									100.00%
Operational CAPEX	\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%	\$ 2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%
TOTAL CAPEX	\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%	\$ 2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%

SD Science & Technology Authority
Operational CAPEX Budget
Monthly Actual vs Budget

Project #	Project Description	Aug. 2015	Budget	\$ Over/UnderBudget	% of Budget
CAP2012-27	Ross Shaft Furnishings Repl.M&S	\$ 189,417.90	\$ 256,990.00	\$ 67,572.10	73.71%
CAP2012-28	Work Decks	\$ 577.97	\$ 1,000.00	\$ 422.03	57.80%
CAP2012-32	SDSTA Personnel	\$ 170,778.92	\$ 203,410.00	\$ 32,631.08	83.96%
CAP2014-01	Sanford Visitor Center Design & Construction	\$ 80,470.28	\$ 100,000.00	\$ 19,529.72	80.47%
CAP2014-05	CASPAR Experiment Development	\$ -	\$ 50,225.00	\$ 50,225.00	0.00%
CAP2014-06	BHSU Jonas Science Building Renovation	\$ 320,942.64	\$ 250,000.00	\$ (70,942.64)	128.38%
CAP2014-09	CASPAR Facility Development	\$ 158,909.51	\$ 200,000.00	\$ 41,090.49	79.45%
CAP2014-11	BHSU Facility Development	\$ 149,357.44	\$ 70,000.00	\$ (79,357.44)	213.37%
CAP2016-01	Sanford Visitor Center Exhibit Davis Tribute	\$ 65,368.59	\$ 80,000.00	\$ 14,631.41	81.71%
CAP2016-02	LZ Surface & Facility Upgrades	\$ 58,228.05	\$ 20,000.00	\$ (38,228.05)	291.14%
CAP2016-03	LZ Xenon Gas	\$ -	\$ -	\$ -	0.00%
Monthly Totals		\$ 1,194,051.30	\$ 1,231,625.00	\$ 37,573.70	96.95%

SD Science & Technology Authority
Operational CAPEX Budget
YTD FY2016 Actual vs Budget

Project #	Project Description	August YTD	FY2016 Budget	\$ Over/UnderBudget	% of Budget	% Remaining
						100%
CAP2012-27	Ross Shaft Furnishings Repl.M&S	\$600,185.63	\$ 3,212,394.00	\$ 2,612,208.37	18.68%	81.32%
CAP2012-28	Work Decks	\$724.22	\$ 34,577.00	\$ 33,852.78	2.09%	97.91%
CAP2012-32	SDSTA Personnel	\$285,255.93	\$ 2,399,004.00	\$ 2,113,748.07	11.89%	88.11%
CAP2014-01	Sanford Visitor Center Design & Construction	\$150,284.25	\$ 337,017.00	\$ 186,732.75	44.59%	55.41%
CAP2014-05	CASPAR Experiment Development	\$0.00	\$ 301,347.00	\$ 301,347.00	0.00%	100.00%
CAP2014-06	BHSU Jonas Science Building Renovation	\$411,789.64	\$ 1,116,209.00	\$ 704,419.36	36.89%	63.11%
CAP2014-09	CASPAR Facility Development	\$745,150.58	\$ 959,709.00	\$ 214,558.42	77.64%	22.36%
CAP2014-11	BHSU Facility Development	\$304,684.13	\$ 275,000.00	\$ (29,684.13)	110.79%	-10.79%
CAP2016-01	Sanford Visitor Center Exhibit Davis Tribute	\$65,368.59	\$ 80,000.00	\$ 14,631.41	81.71%	18.29%
CAP2016-02	LZ Surface Facility Upgrades	\$68,172.05	\$ 1,500,000.00	\$ 1,431,827.95	4.54%	95.46%
CAP2016-03	LZ Xenon Gas	\$0.00	\$ 2,000,000.00	\$ 2,000,000.00	0.00%	100.00%
Totals		\$2,631,615.02	\$ 12,215,257.00	\$ 9,583,641.98	21.54%	78.46%

Source/WBS	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
SDSTA	2.40	2.40	2.40	2.40	2.40	2.40	2.40	3.20	3.20	4.20	4.20	4.20
Administration	0.40	0.40	0.40	0.40	0.40	0.40	0.40	1.20	1.20	1.20	1.20	1.20
Communication	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00
DOE OPERATIONS	77.60	77.60	77.60	75.60	75.60	74.60	74.80	74.80	74.30	74.30	74.30	74.30
Administration	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00	1.00	1.00	1.00
EHS	9.00	9.00	9.00	8.00	8.00	8.00	8.50	8.50	8.50	8.50	8.50	8.50
Engineering	4.60	4.60	4.60	4.60	4.60	4.60	4.30	4.30	4.30	4.30	4.30	4.30
Science	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65	3.65
Operations												
Management	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Ross Shaft	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
Yates Shaft	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Hoist Operations	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Hoist Maintenance	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
Ventilation	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Hazard Mitigation	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Water Treatment	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
Dewatering	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Electrical Power Distribution	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Cyberinfrastructure	2.25	2.25	2.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Buildings and Grounds	6.93	6.93	6.93	6.93	6.93	5.93	5.93	5.93	5.93	5.93	5.93	5.93
Equipment Maintenance	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Davis Campus	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
SDSTA CAPEX	28.25	28.25	28.25	28.25	28.25	28.25	30.25	30.25	30.25	29.90	29.90	29.90
GEN 2 LZ	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
LBNE DESIGN	1.65	1.65	1.65	1.65	1.65	1.65	1.05	1.75	1.75	1.75	1.75	1.75
LBNE NEPA	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00
LUX OPERATIONS	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
INDIRECT	13.10	13.10	13.10	13.10	13.10	13.10	13.10	13.10	14.10	14.10	14.10	14.10
Grand Total	125.43	125.43	125.43	123.43	123.43	122.43	123.53	125.03	125.53	126.18	126.18	126.18

**SDSTA Staffing Plan by Funding Source
August 2015**

Executive Director's Report – Mr. Mike Headley

7B. Attached is the Easement Agreement between Homestake and SDSTA, excluding Exhibits.

Recommended Action:

Motion to approve easement agreement between Homestake and SDSTA, and to authorize the chairperson or executive director, in consultation with legal counsel, to finalize and agree to the terms of the Exhibits hereto.

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Prepared by:
Max Main
Bennett, Main & Gubbrud, P.C.
618 State Street
Belle Fourche, SD 57717
Telephone 605.892.2011

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT (the “**Agreement**”) is entered into effective the _____ day of _____, 2015, by and between **HOMESTAKE MINING COMPANY OF CALIFORNIA** (“**Homestake**”), of 11457 Bobtail Gulch Street, Central City, South Dakota 57754, and **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY** (“**SDSTA**”), a body corporate and body politic of the State of South Dakota, of 630 East Summit Street, Lead, South Dakota 57754. Homestake and the SDSTA sometimes are referred to in this Agreement individually as a “**Party**” and collectively as the “**Parties**.”

RECITALS

A. SDSTA is requesting Easements (as hereinafter defined) from Homestake for the Permitted Uses (as hereinafter defined).

B. Homestake is willing to grant SDSTA such Easements on the Property (as hereinafter defined) on the terms set forth herein.

NOW, THEREFORE, in consideration of the foregoing and the covenants contained herein, Homestake and SDSTA agree as follows:

1. Definitions. As used in this Agreement the following capitalized terms shall have the meanings as set forth below.

A. “Applicable Laws” means any local, state, provincial, territorial, national or federal laws, legislation, statutes, regulations, rules, treaties and orders or requirements of a court or any governmental authority that apply to the Property, or that otherwise relate to a Party’s rights or obligations under this Agreement, as such laws, ordinances, rules and regulations may be amended, modified or supplemented and in effect from time to time.

B. “Arrangement for Disposal” has the same meaning as given to that term in the case law interpreting Section 107(a)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 9607(a)(3).

C. “Disposal” has the same meaning as given to that term in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 9601(29), and the regulations and agency guidance promulgated thereunder.

D. “Environment” means any water or water vapor, any land, including land surface or subsurface, air, fish, wildlife, flora, fauna, biota and all other natural resources.

E. “Environmental Laws” means all Applicable Laws and all covenants running with the land that relate to the protection of health or the Environment whether now existing or hereafter adopted, including without limitation those that relate to the existence, handling, manufacture, treatment, storage, disposal, use, generation, release, threatened release, discharge, refining or recycling of Hazardous Materials or reclaiming of real property, and all obligations relating to protection of the Environment arising out of any use relating to the Property. Without limiting the foregoing, Environmental Law include the Hazardous Materials Transportation Act (49 U.S.C. § 1801 et seq.), the Resource Conservation and Recovery Act of 1976, (42 U.S.C. § 6901 et seq.), the Clean Air Act (42 U.S.C. § 7401 et seq.), the Federal Water Pollution Control Act (33 U.S.C. § 1251), the Safe Drinking Water Act (42 U.S.C. § 300f et seq.), the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. § 9601 et seq.), the Toxic Substances Control Act (15 U.S.C. § 2601 et seq.), the Emergency Planning and Community Right to Know Act (42 U.S.C. § 11001, et seq.), the Occupational Safety and Health Act (26 U.S.C. § 651 et seq.), the Pollution Prevention Act of 1990 (42 U.S.C § 13101 et seq.), the Atomic Energy Act of 1954, 68 Stat. 919, the Energy Reorganization Act of 1974, the Mine Safety and Health Act of 1977, the Uranium Mill Tailings Radiation Control Act (42 U.S.C § 7901 et seq.), and all similar or additional federal, state, local or foreign statutes, all as amended, and all regulations promulgated thereunder, in each case as currently existing or as may hereinafter be promulgated.

F. “Environmental Permit” means all permits, licenses, approvals, authorizations, consents or registrations required by any applicable Environmental Law in connection with the SDSTA’s development, construction, equipping, use and/or operation of the Property.

G. “Environmental Risk Insurance” means a policy of insurance, underwritten by a reputable insurer with a security rating from A. M. Best of not less than A-VII, or another insurer approved in writing by Homestake in its sole discretion, that provides coverage for remediation and reclamation, bodily injury, property damage, contractual liability and defense costs arising out of or related to SDSTA’s activities on or associated with the Property: (i) risks associated with on-site and off-site cleanup costs, bodily injury and property damage claims relating to pre-existing and new environmental conditions, (ii) risks associated with past or future violations of Environmental Laws, and (iii) risks arising out of the SDSTA’s use, operation, reclamation, closure or remediation of the Property by, as applicable, the State of South Dakota, the SDSTA, and its or their representatives or by anyone else. Such insurance shall specifically include contractual liability coverage (including, in particular, coverage applicable to the contractual indemnifications given by the State of South Dakota and the SDSTA to Homestake and provide coverage for legal defense expenses paid or incurred concerning any claim potentially covered under such insurance. The Environmental Risk Insurance will contain no special limitations on the scope of coverage provided to Homestake.

H. “Hazardous Material” means any substance: (i) the presence of which requires reporting, investigation, removal or remediation under any Environmental Laws, including without limitation, mine tailings, waste dumps and other materials; (ii) that is defined as a “hazardous waste,” “hazardous substance” or “pollutant” or “contaminate” under any Environmental Laws; (iii) that is toxic, explosive, corrosive, flammable, ignitable, infectious, radioactive, reactive, carcinogenic, mutagenic or otherwise hazardous and is regulated under any Environmental Laws; (iv) the presence of which on a property causes or threatens to cause a nuisance upon the property or to adjacent properties or poses or threatens to pose a hazard to the health or safety of persons on or about the property; (v) that contains gasoline, diesel fuel or other petroleum hydrocarbons; or (vi) that contains PCBs, asbestos or urea formaldehyde foam insulation.

I. “Liabilities” means all liabilities (whether contingent, fixed or unfixed, liquidated or unliquidated, or otherwise), obligations, deficiencies, demands, claims, suits, actions, causes of action, assessments, losses, costs, interest, fines, penalties, or damages, (including costs or expenses of any and all investigations or proceedings and reasonable fees and expenses of attorneys, accountants and other experts).

J. “Open Cut” means the open pit at the Homestake Mine in Lead, South Dakota.

Homestake – SDSTA / Easement Agreement

K. “Property Donation Agreement” means the April 14, 2006 agreement the Parties entered relating to certain real and personal property located in and near Lead, South Dakota.

L. “Release” has the same meaning as given to that term in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. § 9601(22), and the regulations and agency guidance promulgated thereunder, and which release is required to be reported to the relevant governmental authorities under Applicable Law.

2. Grant of Easements: Subject to the terms and conditions hereof, Homestake hereby grants to SDSTA a permanent easement for, over and upon the real estate described on Exhibit “A” attached hereto (the “**Property**”) for the Permitted Uses described herein (the “**Primary Easement**”). Also subject to the terms and conditions hereof, Homestake hereby grants two further permanent easements on the Property as follows: (1) for construction access to the Primary Easement site as shown on Exhibit “B” attached hereto (the “**Construction Access Easement**”); and (2) for maintenance access to the Primary Easement site as shown on Exhibit “C” attached hereto (the “**Maintenance Access Easement**”). The Primary Easement, the Construction Access Easement and the Maintenance Access Easement are sometimes referred to herein collectively as “the Easements”.

3. Permitted Uses: SDSTA may only use the Primary Easement for the purpose of disposing of excavated rock excavated from the former Homestake gold mine located in and near Lead, South Dakota to facilitate the construction, enlargement, modification or maintenance of underground laboratory facilities and related support and infrastructure facilities (the “**Permitted Uses**”).

4. Easement Conditions:

A. Permits. Prior to commencing any activities authorized by the Easements, including, without limitation, use and occupancy of the Property for the Permitted Uses, SDSTA shall obtain all necessary Environmental Permits as well as all other consents, approvals and actions of, filings with, and notices to any governmental authority or third party necessary to permit the SDSTA to use the Easements and Property. Further, SDSTA shall conduct engineering analysis, geologic mapping and characterization, and all other studies of the Environment required for any Environmental Permit or other governmental or third party consent. Activities authorized by the

Homestake – SDSTA / Easement Agreement

Easements may only be commenced after SDSTA provides to Homestake copies of the Environmental Permits and any other necessary permits and approvals.

B. Engineering Study-High Wall Stability. Prior to commencing any activities authorized by the Easements, including, without limitation, use and occupancy of the Property for the Permitted Uses, SDSTA shall cause an engineering study to be completed to determine if the placement of excavated rock will adversely impact high wall stability of the Open Cut. A written report summarizing the study shall be furnished to Homestake. Activities authorized by the Easements may only be commenced after Homestake, in its sole discretion, acting reasonably, approves the engineering study and report.

C. Further Engineering, Geologic, Reclamation, and Other Studies. Prior to commencing any activities authorized by the Easements, including, without limitation, use and occupancy of the Property for the Permitted Uses, SDSTA shall conduct other studies required by any governmental authority, or such other studies necessary to demonstrate that use of the Open Cut, including the deposition of all materials and substances in the Open Cut, the Property, and the surrounding Environment for Permitted Uses will not have an unreasonably negative impact. These studies will include, without limitation, engineering, geologic, reclamation, transportation (on or off Property), archeology, or historic preservation studies. Such studies must be approved in writing by Homestake in its sole discretion, acting reasonably, before SDSTA may use or occupy the Property for the Permitted Uses. Such approval shall not relieve SDSTA from its responsibility for all Liabilities or its obligation to indemnify Homestake, all as set forth in this Agreement.

D. General Conditions. Excavated rock generated by SDSTA may be brought to the surface and delivered to the Primary Easement or delivered from the underground directly to the Primary Easement. Excavated rock brought to the surface will be transported to the Primary Easement via truck, a conveyer system or some combination of the two. SDSTA will manage and pay for the design, construction, maintenance, and demolition of any new installations or modifications of or within the Easements to facilitate transportation of excavated rock to the Primary Easement. SDSTA shall use reputable professional engineering firms to provide designs for such installations, which design shall be subject to Homestake's review and approval. Homestake agrees to expedite its review of design documents and in any event to respond with approval or requests for changes within 60 days of submission of a design document. If road or other infrastructure modifications are required to facilitate truck transport across the Construction Access Easement, SDSTA shall be responsible to

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Homestake – SDSTA / Easement Agreement

design and pay for any such modifications, and SDSTA shall be responsible and pay for maintenance of the Construction Access Easement while it is in use for the purposes described herein. Upon completion of the placement of excavated rock contemplated hereby, SDSTA shall leave the Construction Access Easement in similar or better condition than prior to the commencement of work, at which time SDSTA's obligation to maintain the Construction Access Easement shall cease. There shall be no limits on the chemical, physical, or geological characteristics of the excavated rock material deposited on the Primary Easement. SDSTA shall be responsible for all environmental controls associated with the transportation and disposal of excavated rock hereunder. Excavated rock shall be placed such that all water drainage from the material placed by SDSTA flows to the SDSTA's facilities, to be treated by SDSTA before discharged to the environment. Quantities of placement shall be limited by physical space availability only, with expected quantities in the range of one million to five million tons.

E. Terraville Road. If a primary route for trucking excavated rock will be the Terraville Road, then SDSTA must take reasonable measures to accommodate Homestake's use of the road.

F. Non-Exclusive. All the Easements granted herein are non-exclusive, and Homestake reserves the right to enter the Easements, at its sole risk. Homestake cannot unreasonably interfere with the SDSTA's Permitted Use under this Easement.

5. Health and Safety Plan: Prior to SDSTA commencing any work or activities on Homestake real property, SDSTA and Homestake will develop a site-specific health and safety plan, to be approved by Homestake, in its sole discretion. The health and safety plan will include all of Homestake's safety, reporting and emergency protocols. SDSTA will comply with instructions from Homestake employees regarding health and safety matters. It is the responsibility of SDSTA to contact One Call to ensure all utilities are located.

6. Insurance, Limitation of Liability, and Indemnity:

A. Employment Insurance. SDSTA shall comply with all state and federal social security and unemployment insurance laws.

B. Insurance. SDSTA, from the time of commencement of any activities authorized by the Easements, shall provide and maintain in effect the types and amounts of insurance indicated in this Section with insurance companies approved by

Homestake – SDSTA / Easement Agreement

Homestake in its sole discretion. Such coverage will be documented and SDSTA will forward such documentation to Homestake prior to use or occupancy of the Property.

(1) Worker's Compensation Insurance. SDSTA shall secure worker's compensation insurance, including Occupational Disease (as that term is defined by South Dakota law) insurance in accordance with the laws of the State of South Dakota, and Employers' Liability Insurance in the amounts of not less than \$500,000 per person, and \$500,000 per accident.

(2) General Liability Insurance. SDSTA shall secure general liability insurance naming Homestake as an additional insured that provides coverage for contractual liability, as well as the indemnity agreement set forth in this Agreement and products-completed operations coverage with limits of not less than \$2,000,000 and not more than \$5,000,000 applicable to bodily injury, sickness or death in any one occurrence; and not less than \$2,000,000 and not more than \$5,000,000 for loss of or damage to property in any one occurrence.

(3) Environmental Risk Insurance. SDSTA shall secure Environmental Risk Insurance naming Homestake as an additional insured to cover any and all on-site and off-site pollution for its use or occupancy of the Property for the Easements and Permitted Uses, or provide for such coverage under policies SDSTA maintains under the Property Donation Agreement.

(4) Subcontractors' Insurance. SDSTA shall require all of its contractors and subcontractors to obtain, maintain and keep in force during the time in which they are engaged in performing work hereunder, the coverages set forth in subparagraphs (1) and (2) above, and subparagraph (6) below, and shall furnish Homestake acceptable evidence of such insurance prior to starting work on the Homestake real property. If any contractors or subcontractors do not obtain, maintain and keep in force the required coverages, then SDSTA will be deemed to have elected to provide the required coverages under policies SDSTA maintains hereunder, or under policies SDSTA maintains under the Property Donation Agreement. Such coverage will be documented and forwarded to Homestake prior to use or occupancy of the Property.

(5) Equipment Insurance. All equipment, supplies and materials belonging to SDSTA or used by or on behalf of SDSTA for its performance hereunder shall be brought to and kept at the job site at SDSTA's sole cost, risk and expense, and Homestake shall not be liable for loss or damage thereto. Any insurance

Homestake – SDSTA / Easement Agreement

policies carried by SDSTA or any third party on said equipment, supplies and materials shall provide for waiver of the underwriter's right to subrogation against Homestake.

(6) Automobile Liability Insurance. SDSTA shall secure automobile liability insurance covering owned, non-owned, and hired vehicles used by SDSTA in limits not less than \$1,000,000 applicable to bodily injury, sickness or death of any one person, and \$1,000,000 for more than one person in any one occurrence; and \$1,000,000 for loss of or damage to property in any one occurrence.

(7) Nuclear Liability Insurance. In the event that the SDSTA produces neutrinos or particles with a reactor on the Property, SDSTA shall, at its own expense, obtain and maintain, or cause to be obtained and maintained, nuclear liability insurance naming Homestake as an additional insured from American Nuclear Insurers with a combined property damage and bodily injury limit of liability in an amount determined by the Nuclear Regulatory Commission (NRC) covering all nuclear reactors, nuclear materials and nuclear waste in connection with the use of the Property. The deductible shall be not greater than \$250,000 per accident.

(8) Subrogation. All policies shall be endorsed to provide that the underwriters and insurance companies of SDSTA shall not have any rights of subrogation against Homestake, or against any subsidiaries, agents, employees, invitees, servants, subcontractors, insurers, underwriters, and such other parties as Homestake may designate.

(9) Certificates. SDSTA shall furnish Certificates of Insurance to Homestake evidencing the insurance required hereunder and, upon request, Homestake may examine true copies of the actual policies. Each certificate shall provide that thirty (30) days prior written notice shall be given the Homestake in the event of cancellation or material change in the policies. All policies shall be endorsed to provide that there will be no recourse against Homestake for payment of any premium.

(10) Additional Insurance. By so specifying, Homestake may reasonably require additional types of insurance; provided, however that the limits thereof may not exceed the limits of liability stated in this Agreement..

(11) Primary Insurance. It is hereby understood and agreed that any coverage provided Homestake by SDSTA's insurance under this Agreement is primary insurance and shall not be considered contributory insurance with any insurance policies of Homestake.

C. Limit of Liability.

(1) SDSTA shall be responsible for all Liabilities, including, without limitation, the liabilities set forth in Section 6.D.(1) through 6.D.(6); provided, however, anything elsewhere in this Agreement to the contrary notwithstanding, that SDSTA's responsibility for Liabilities, including but not limited to any responsibility to indemnify set out in this Agreement, shall be limited to Liabilities resulting from SDSTA's use and occupancy of the Property.

(2) The Parties agree that there are no covenants between them regarding the fitness or suitability of the Property for the Easements or Permitted Uses. WITHOUT LIMITING THE FOREGOING, HOMESTAKE EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES CONCERNING THE SUITABILITY OF THE PROPERTY FOR ANY OF SDSTA'S INTENDED USES OR FITNESS FOR A PARTICULAR PURPOSE OR APPLICATION AND SDSTA'S USE OF THE PROPERTY FOR THE EASEMENTS AND PERMITTED USES SHALL BE 'AS IS, WHERE IS' WITH ALL FAULTS.

D. Indemnification. SDSTA agrees to and does hereby release, indemnify and hold Homestake and its employees, agents and officers harmless from and against all Liabilities, including, without limitation, the following:

(1) Any and all claims and liabilities, including, without limitation, costs, attorneys' fees, and expenses, for bodily injury to, or death of, persons, (including claims and liabilities for care or loss of services in connection with any bodily injury or death);

(2) Any and all claims and liabilities, including, without limitation, costs, attorneys' fees, and expenses, for loss or destruction of or damage to any property belonging to SDSTA or others (including claims or liabilities for loss of use of any property);

(3) Any and all claims, losses, and liabilities, including, without limitation, costs, attorneys' fees, and expenses, for any damage to Homestake property (including without limitation any environmental damages or liability) arising from any negligent or wrongful activities of SDSTA, its agents, representatives, contractors, or subcontractors;

(4) Any and all claims, losses, and liabilities, including, without limitation, costs, attorneys' fees, and expenses, for loss (including loss of use) or

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destruction of or damage to (a) materials, supplies, equipment and other property necessary for the work, or (b) any property of SDSTA, its agents, representatives, contractors, or subcontractors;

(5) Any and all claims, losses, and liabilities, including, without limitation, costs, attorneys' fees, and expenses, resulting directly or indirectly from or occurring in the course of SDSTA's exercise of its rights under the Easements, including, without limitation, transportation activities on, to, or from the Property or for purposes of the Easements; and

(6) Any and all claims, losses, and liabilities, including, without limitation, costs, attorneys' fees, and expenses, resulting directly or indirectly from (a) damage to the Environment from or related to SDSTA's, or its agent's, representative's, contractor's, or subcontractor's, use or occupancy of the Properties for the Easements or Permitted uses, (b) violation or alleged violation of Applicable Laws or Environmental Laws, or (c) violation or alleged violation of or failure to secure Environmental Permits or other governmental consents or approvals.

7. Perpetual Easements, Termination for Non-Use: The Easements granted herein shall be perpetual easements which shall run with the land and be binding upon, and inure to the benefit of, the Parties and their successors and assigns. Provided, however, that if SDSTA does not dispose of excavated rock within the Primary Easement Area within twenty (20) years of the date of recording of this Agreement, SDSTA's rights hereunder shall cease and shall no longer have any force or effect.

8. Notices: Any notice, election or other correspondence required or permitted hereunder shall be deemed to have been properly given or delivered when made in writing and delivered personally to the Party to whom directed, or when deposited in the United States mail, postage prepaid, by certified mail, return receipt requested, and addressed to the Party to whom directed as follows:

If to Homestake: Homestake Mining Company of California
Attn: Site Manager
11457 Bobtail Gulch Street
Central City, SD 57754

Homestake – SDSTA / Easement Agreement

With a copy to: Homestake Mining Company of California
Attn: Vice President & General Counsel, North America
460 West 50 North, Suite 500
Salt Lake City, UT 84101

If to SDSTA: South Dakota Science and Technology Authority
Attn: Mike Headley, Executive Director
630 E. Summit
Lead, SD 57754

9. Time of Essence: Time is of the essence of this Agreement.

10. Compliance With All Laws: In performing work under this Agreement, SDSTA, its contractors and subcontractors, shall comply with all applicable Federal, State and local laws, rules and regulations.

11. Neutral Construction: This Agreement and the wording contained herein accords with the negotiations of the Parties. Accordingly, no provision hereof shall be construed against one Party or in favor of another Party merely by reason of draftsmanship.

12. Interpretative Matters: References to Sections and Exhibits in this Agreement are to Sections of this Agreement and to the Exhibits attached hereto. Words in the singular or plural include the singular and plural and pronouns stated in either the masculine, the feminine or neuter gender shall include the masculine, feminine and neuter. When not expressly stated, the word “including” means “including but not limited to.”

13. Assignment: This Agreement and the obligations, liabilities, rights and benefits hereunder, may not be assigned by either Party without the express written consent of the other Party; provided, however, that SDSTA may without Homestake’s consent assign its interest herein to the United States of America, acting through the Department of Energy, upon written notice thereof to Homestake.

14. Entire Agreement: This Agreement constitutes the entire agreement between the Parties and supersedes all prior agreements and understandings, both written and oral, between the Parties with respect to the subject matter hereof. This Agreement may only be amended, modified or supplemented by a written instrument signed by all

Homestake – SDSTA / Easement Agreement

the Parties expressly stating that such instrument is intended to amend, modify or supplement this Agreement.

15. Governing Law, Jurisdiction and Venue, and Service of Process: This Agreement shall be construed under and governed by the laws of the State of South Dakota, without the application of the conflicts of law principles thereof, and any applicable federal law. Any lawsuit arising out of or related to this Agreement shall be brought in the federal or state courts of South Dakota. Process in any such suit, action or proceeding may be served on any Party anywhere in the world, whether within or without the jurisdiction of any such court. Without limiting the foregoing, service of process on a Party may be made by mail upon the designated person at the address provided in Section 8.

16. Severability: If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable, such provision shall be enforced to the fullest extent permitted by applicable law and the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby. A provision of similar economic effect shall be substituted for any invalid, illegal or unenforceable provision.

17. Counterparts: This Agreement may be signed in counterparts, each of which will be deemed an original and all of which taken together will constitute one and the same instrument. The Parties intend that fax signatures constitute original signatures and that a faxed agreement containing the signatures (original or faxed) of all the Parties is binding on the Parties.

IN WITNESS WHEREOF, the Parties have executed this Agreement the day and year first above written.

[SIGNATURE PAGE FOLLOWS]

**HOMESTAKE MINING COMPANY OF
CALIFORNIA**

Dated _____, 2015. By: _____

Signature

Printed Name and Title

Dated _____, 2015. By: _____

Signature

Printed Name and Title

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY
AUTHORITY**

Dated _____, 2015. By: _____

Signature

Executive Director

Printed Name and Title

Homestake – SDSTA / Easement Agreement

STATE OF _____)
) ss. **CORPORATE ACKNOWLEDGMENT**
COUNTY OF _____)

On this the ____ day of _____, 2015, before me, the undersigned officer, personally appeared _____, known to me to be the _____ for **HOMESTAKE MINING COMPANY OF CALIFORNIA**, and on oath stated that he was authorized to sign the foregoing instrument on behalf of the corporation for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public
My Comm. Expires _____

STATE OF _____)
) ss. **CORPORATE ACKNOWLEDGMENT**
COUNTY OF _____)

On this the ____ day of _____, 2015, before me, the undersigned officer, personally appeared _____, known to me to be the _____ for **HOMESTAKE MINING COMPANY OF CALIFORNIA**, and on oath stated that he was authorized to sign the foregoing instrument on behalf of the corporation for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public
My Comm. Expires _____

Homestake – SDSTA / Easement Agreement

STATE OF _____)

) ss. **CORPORATE ACKNOWLEDGMENT**

COUNTY OF _____)

On this the _____ day of _____, 2015, before me, the undersigned officer, personally appeared _____, known to me to be the Executive Director for **SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**, and on oath stated that he was authorized to sign the foregoing instrument in such capacity for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

My Comm. Expires _____

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Executive Director's Report – Mr. Mike Headley

7C. Placeholder - Strategic Plan Report.

Recommended Action:

Motion to approve strategic plan report as presented.

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Executive Director's Report – Mr. Mike Headley

7D. Attached are the signed Declarations of Surplus for the following:

- ATV
- Refuge Chambers

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DECLARATION OF SURPLUS PROPERTY

The 2008 Artic Cat diesel ATV #109, Serial No. 4UF08ATV68T220669, was removed from service in July, 2015. The cost to restore this vehicle to a safe and usable condition would greatly exceed its value.

The South Dakota Science and Technology Authority (SDSTA) has no further use for this property. It will be used for replacement parts for other ATVs in use on the property. ATV #109 has a net value of One Thousand Nine Hundred Four Dollars and Fifty-four Cents (\$1,904.54) after depreciation.

I hereby declare the 2008 Artic Cat diesel ATV #109 to be Surplus Property.

Dated at Lead, South Dakota this 28th day of August, 2015.

A handwritten signature in blue ink, appearing to read "Mike Headley".

Mike Headley
SDSTA Executive Director

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DECLARATION OF SURPLUS PROPERTY

The South Dakota Science and Technology Authority (SDSTA) purchased two refuge chambers from MineARC SYSTEMS AMERICA LLC in July 2007 for One Hundred Forty-Three Thousand Three Hundred Sixty-Nine Dollars and Forty-Eight Cents (\$143,369.48).

While the refuge chambers appear on the SDSTA Fixed Asset Inventory of Supplies Listing, depreciation has not been applied because the chambers were never put into service. The refuge chambers are inoperable in their current condition, all consumable items are outdated, and they are too large to be transported underground.

Having no further use for this property, I hereby declare the two refuge chambers to be Surplus Property. The refuge chambers will be donated to the South Dakota School of Mines and Technology.

Dated at Lead, South Dakota this 9th day of September, 2015.

A handwritten signature in blue ink, appearing to read "Mike Headley".

Mike Headley
SDSTA Executive Director

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Discuss Draft Programmatic Agreement (LBNF) – Mr. Mike Headley

Placeholder – Discuss the Programmatic Agreement regarding the construction and operation of the Long Baseline Neutrino Facility and Deep Underground Neutrino Experiment (LBNF/DUNE).

Recommended Action:

Motion to approve the programmatic agreement regarding the construction and operation of the long baseline neutrino facility and deep underground neutrino experiment.

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Third Amendment to Property Donation Agreement – Mr. Tim Engel

Attached is the signed Third Amendment to the Property Donation Agreement (PDA) discussed at the June 30, 2015 meeting.

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**THIRD AMENDMENT TO PROPERTY DONATION AGREEMENT
BETWEEN AND AMONG
HOMESTAKE MINING COMPANY OF CALIFORNIA,
THE STATE OF SOUTH DAKOTA
AND THE
SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

This Third Amendment to Property Donation Agreement ("Third Amendment") is entered into effective the Third Amended Effective Date (as defined herein) between and among Homestake Mining Company of California, the State of South Dakota and the South Dakota Science and Technology Authority.

RECITALS

A. The parties previously entered into a Property Donation Agreement dated as of April 14, 2006, relating to certain real and personal property located in and near Lead, South Dakota (the "Donation Agreement").

B. The Donation Agreement was amended by and through the First Amendment to Property Donation Agreement dated effective May 21, 2007 (the "First Amendment"), and by and through the Second Amendment to Property Donation Agreement dated effective September 17, 2009 (the "Second Amendment").

C. The parties desire to further amend the Donation Agreement, as previously amended by the First Amendment and the Second Amendment, by and through this Third Amendment, to authorize the Authority to transfer \$2,500,000.00 from the Indemnification Fund to the Captive (as defined below) and to provide certain limits of insurance through coverage provided by the Captive, all upon the terms and conditions set forth herein.

Subject to the terms, conditions and covenants contained in this Third Amendment, and for good and valuable consideration, the receipt and sufficiency of which is acknowledged, the Parties agree as follows:

1. Amendment. The Donation Agreement, as previously amended by the First Amendment and the Second Amendment, is further amended as follows:

(a). Section 1.1 – Definitions – is amended by adding the following new subsections:

1.1(k-1). "Captive" means the South Dakota Authorities Captive Insurance Company, LLC;

1.1(s-1). "Division of Insurance" means the South Dakota Division of Insurance, an agency and instrumentality of the State;

1.1(III-1). "Third Amended Effective Date" means the date upon which the Division issues a Certificate of Authority authorizing the Captive to act as an insurer at the levels and types of coverage provided for in this Third Amendment;

(b). Subsection 6.8(c) is amended in its entirety to read as follows:

6.8(c). as of the Third Amendment Effective Date, the Authority will maintain an unencumbered balance of \$7,500,000.00 in the Indemnification Fund, reduced only by any amounts actually spent by the Authority for indemnification of the Homestake Indemnified Parties. In the event the value of the Indemnification Fund decreases for any other reason, the Authority shall promptly restore the amount of any decrease to the Indemnification Fund;

(c). Section 6.8 is amended to add a new subsection (f) to read as follows:

6.8(f). anything elsewhere in this Agreement to the contrary notwithstanding, as of the Third Amendment Effective Date, the Authority may transfer up to \$2,500,000.00 of the existing \$10,000,000.00 balance in the Indemnification Fund into the Captive for the purposes described in the Third Amendment.

(d). Section 6.11, subsection (e) of which was amended in the First Amendment, is further amended to add a new subsection (h) to read as follows:

6.11(h). anything elsewhere in this Agreement to the contrary notwithstanding, as of the Third Amended Effective Date, if the Captive is funded with 2,500,000.00 pursuant to Section 1(c) of the Third Amendment or otherwise, the first \$1,000,000.00 of coverage under the General Liability Insurance may be provided by the Captive; provided, however that the deductible or retention thereunder may not exceed \$50,000.00. Upon Homestake's prior written consent, the Captive may provide increased limits of General Liability Insurance and may provide limits under the Environmental Risk Insurance so long as the General Liability Insurance and Environmental Risk Insurance are designed to provide equivalent financial protection to the Homestake Indemnified Parties, as determined in the reasonable discretion of Homestake. Nothing herein shall act to limit the ability of the Authority to obtain insurance coverage from the Captive that is not required by this Agreement.

(e). Section 6.11, subsection (e) of which was amended in the First Amendment, is further amended to add a new subsection (i) to read as follows:

6.11(i). in the event Division of Insurance withdraws, revokes or rescinds the certificate of authority for the Captive, or issues a cease and desist or other, similar order, or it otherwise becomes obvious to the Authority, acting reasonably, that the Captive does not have sufficient capital to pay all pending claims which it is reasonably likely it will be required to pay under the coverage documents issued by the Captive, the Authority will immediately purchase replacement insurance from a commercial insurer meeting the requirements of subsection 1.1(dd) of this Agreement (for General Liability Insurance) or subsection 1.1(y) (for Environmental Risk Insurance, to the extent the Captive provides insurance limits under the Environmental Risk Insurance pursuant to Section 1(d) of the Third Amendment) to cover the risks otherwise insured by the Captive as required under this Agreement. If such coverage is not bound within thirty (30) business days of the triggering event, the Authority shall suspend all activities involving the Assets until the State of South Dakota and the Authority have obtained such coverage or provided a substitute means of protecting the Homestake Indemnified Parties to the same extent they would have been protected under this Agreement had the coverage remained available. Such substitute means may include an appropriate increase in the Indemnification Fund, posting of an irrevocable letter of credit in favor of the Homestake Indemnified Parties or some combination of methods designed to provide equivalent financial protection to the Homestake Indemnified Parties, as determined in the reasonable discretion of Homestake.

2. Consent to Captive as Insurer. Pursuant to subsection 1.1(dd) of the Donation Agreement, and subject to the terms and conditions set out below, Homestake hereby consents to coverage of the first \$1,000,000.00 of General Liability Insurance by the Captive.

3. Donation Agreement, First Amendment and Second Amendment Remain in Effect. Except as specifically amended in this document, the covenants, terms and conditions of the Donation Agreement, as amended by the First Amendment and the Second Amendment, remain in full force and effect.

4. Amendment to Deed. The terms of the Deed dated May 15, 2006, and recorded in the Office of the Register of Deeds, Lawrence County, South Dakota, on May 17, 2006, as document #2006-03035 are hereby amended consistent with the terms of the First Amendment, the Second Amendment and this Third Amendment.

5. Defined Terms. Capitalized terms not defined in this Third Amendment are defined in Section 1.1 of the Donation Agreement, the First Amendment or the Second Amendment.

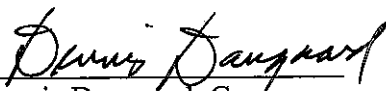
6. Limitation on Enforceability of Third Amendment. This Third Amendment shall be of no force and effect if the Third Amended Effective Date is on or after November 15, 2015.

7. Counterparts. This Third Amendment may be executed in two or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. The Parties agree that this Third Amendment may be transmitted between and among them by facsimile machine or by portable document format. The parties intend that a

facsimile signatures or signatures in portable document format constitute original signatures and that a facsimile or portable document format document containing the signatures (facsimile, portable document format or original) of all the Parties is binding on the Parties.

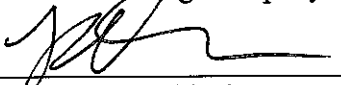
IN WITNESS WHEREOF, the Parties hereto have caused this Third Amendment to be executed effective as of the Third Amended Effective Date.

State of South Dakota

By: 
Dennis Daugaard, Governor

Date: 21 August 2015

Homestake Mining Company of California

By: 
Richie D. Haddock

Its: Director

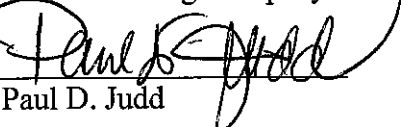
Date: 13/Aug/2015

South Dakota Science and
Technology Authority

By: 
Casey Peterson, Chairman

Date: Aug 24, 2015

Homestake Mining Company of California

By: 
Paul D. Judd

Its: Tax Director

Date: 13/Aug/2015

Executive Session – Chairperson Casey Peterson

Recommended Action:

Motion to enter into executive session to discuss personnel matters and to consult with legal counsel concerning contractual and legal matters.

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Report from Executive Session – Chairperson Casey Peterson

Recommended Action:

Motion to accept report from Executive Session.

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Conflict of Interest Mitigation Plan – Mr. Tim Engel

Attached is the Conflict of Interest Mitigation Plan to be discussed.

Recommended Action:

Motion to approve the conflict of interest mitigation plan as presented.

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**Fermi Research Alliance, LLC/
South Dakota Science and Technology Authority**

Conflict of Interest Mitigation Plan

I. Executive Summary.

Mike Headley's dual role as Far Site Director for the LBNF Project for Fermi Research Alliance, LLC ("FRA") and as Executive Director of South Dakota Science and Technology Authority ("SDSTA") may put him in a negotiating and/or decision-making role for both FRA and SDSTA relating to a contract or other issue. This document is intended to provide a broad outline of the challenges to be addressed, the plan for addressing and mitigating the conflict, and related administrative procedures.

Mr. Headley's dual appointments as Far Site Director for LBNF and Executive Director of SDSTA may result in conflicts of interest resulting in his duty and desire to be loyal to, and act in the best interests of, both appointing entities. Examples of circumstances that may give rise to a conflict of interest or the appearance of a conflict of interest include:

1. Negotiation of pricing and other terms of contracts between FRA and SDSTA awarded on a sole-source basis.
2. Drafting of bid or proposal solicitation documents for either party when the other might reasonably be expected to bid or submit a proposal, including contracts awarded on a sole-source basis.
3. Evaluation of a bid or proposal from FRA on behalf of SDSTA or of a bid or proposal from SDSTA on behalf of FRA.
4. Involvement in wage rate determinations involving SDSTA employees as those determinations relate to contracts with FRA.
5. Evaluating and making policy decisions or recommendations when the best interests of LBNF, DUNE, or other FRA-related projects may not be fully consistent with SDSTA's broader mission to act as a multi-discipline laboratory facility.
6. Making determinations in the event of temporary restrictions on the availability of resources, including relating to site access, access to hoists and drifts, and other allocation of SDSTA resources, including personnel.
7. Making determinations concerning representations and certifications to FRA on behalf of SDSTA.

The foregoing listing is not intended to be exhaustive, but instead to be illustrative of the types of conflicts that may arise. All interested parties should continue to evaluate Mr. Headley's involvement in transactions on both sides with an eye toward identifying and mitigating possible conflicts of interest.

II. Conflict Mitigation Plan and Processes.

A. Process for identifying and addressing conflicts generally.

In order to ensure that Mr. Headley and third parties are aware of possible conflicts, or the appearance thereof, and procedures for addressing those conflicts, FRA and SDSTA will provide informal training to their respective personnel as each entity deems necessary and appropriate. This training should include, but may not necessarily be limited to, management personnel involved in the procurement process.

Mr. Headley will be mindful of possible conflicts, including the appearance of conflicts, and will endeavor to self-identify as soon as he recognizes the existence or possibility of a conflict.

Third parties working with Mr. Headley will also be mindful of and report actual and potential conflicts of interest, as well as the appearance of conflicts.

If Mr. Headley or any other person becomes aware of an actual, apparent, or potential conflict of interest, they will immediately report the matter to the General Counsels for FRA and SDSTA, respectively. Each General Counsel will designate a lawyer affiliated with their organization to act on reported conflicts in the event of their absence or inability to act. Contact information for each General Counsel and their designees is set out in Appendix A. The standard form email to be used to report a conflict is set forth in Appendix B.

Within two business days of receipt of the report, the FRA and SDSTA General Counsel will confer as to the report and make the initial determination as to the existence of a conflict and a proposed plan to mitigate the conflict. The General Counsel will jointly prepare a report generally describing the facts and circumstances giving rise to the conflict, their conclusion as to whether a conflict exists, and their proposed plan of mitigation. The report will be in the form of an email and will be sent to Mr. Headley, Tim Meyer and Chris Mossey at FRA, and the Chairman of the Board, CFO, and Laboratory Director at SDSTA.

The provisions of the paragraph immediately above notwithstanding, if Mr. Headley identifies a conflict and determines he should be recused from the decision-making process, Mr. Headley may refer the matter to the appropriate default party or parties described below in subsection B. In that event, Mr. Headley will follow the reporting procedure described above, including that the proposed plan of mitigation is to refer the matter to the default substitute decisions-maker or makers, and he will include the default substitute decision-makers on the distribution list for the email. Absent written objection from General Counsel or either of the default substitute decision-makers within two business days from receipt of the report, the report and the proposed plan of mitigation shall be deemed approved.

In the event a potential conflict of interest requires resolution prior to the expiration of the standard two business day review period, the party reporting the conflict shall call that fact to

the attention of FRA and SDSTA General Counsel and General Counsel shall make reasonable efforts to resolve the matter as soon as possible.

In the event General Counsel cannot agree on the existence of a conflict and/or a plan of mitigation, the matter will be escalated to Tim Meyer at FRA and the SDSTA Laboratory Director. If the matter cannot be resolved at that level, it will be further escalated to the FRA Director and the Chairman of the Board of SDSTA, whose decision will be final and binding on the parties.

In the event Mr. Headley does not agree with the decision of General Counsel, he may escalate the decision as described above.

B. Mitigation in the event of a conflict.

In the event of a conflict reasonably susceptible to and in need of mitigation, unless otherwise determined under the terms of this policy, all responsibility for the matter on the part of FRA shall default to _____ or his/her designee and all responsibility on the part of SDSTA shall default to the Laboratory Director or his/her designee. The mitigation plan may call for referring a matter to persons other than the default substitute or substitutes if under the circumstances it would be inappropriate for the default substitute or substitutes to resolve the matter. For example, the default substitute may have a conflict of interest, or the default substitute may lack the subject matter knowledge or experience necessary to address the issue appropriately.

If it is not appropriate to redirect the matter to the default parties identified above, or if they are unable or unwilling to act, General Counsel, in consultation with the management of their respective organizations (but excluding all conflicted parties) shall identify the persons to be substituted for the conflicted parties.

C. Non-disqualifying conflicts.

There may be instances where a conflict of interest exists, but it is either not practical to mitigate it or the conflict is immaterial. In those cases, General Counsel will jointly communicate their decision that the otherwise conflicted party may continue to handle the issue and the reasons therefor, along with any special conditions imposed by General Counsel.

Examples of conflicts not practical to mitigate include circumstances where there is insufficient time to include a non-conflicted party in the decision-making process or where the conflicted party is the only one with the knowledge or experience needed to manage the matter. In these circumstances, General Counsel will endeavor to mitigate the conflict by including themselves and/or other third parties in the decision-making process.

Examples of immaterial conflicts include circumstances where a conflict exists but the chances of the conflict affecting the decision-making process are remote or the amount involved is \$XXXX or less.

III. Documentation.

Appendix B contains the following:

1. Standard form email to General Counsel reporting a possible conflict of interest.
2. Standard form response from General Counsel reporting their determination as to the conflict and their mitigation plan.

All subsequent action or other communication undertaken in connection with a conflict of interest report shall be in the form of a reply or forward of the initial email report. Electronic and hard copies of such emails shall be maintained at FRA at the Office of General Counsel and at SDSTA in the office of the CFO.

IV. Annual Review.

At each annual meeting, SDSTA's General Counsel shall provide a report to the SDSTA board of directors concerning the implementation of this plan, including the number and general nature of conflicts identified, number resolved by general counsel and number resolved after escalation. The annual report will also include recommendations, if any, for changes to the overall mitigation plan. A copy of the annual report to the SDSTA board of directors shall be provided to the FRA Office of General Counsel for review, comment, and concurrence prior to its submission.

V. Other.

Each of FRA and SDSTA will adopt policies providing that no person in an employment or contractual relationship with them may be subject to retaliation for a conflict of interest report made in good faith.

Confirm date and time of next meeting – Chairperson Casey Peterson

The next board meeting will be held on December 17, 2015 beginning at 9:00 A.M. (MT).

** This is a reminder to bring your personal calendars to set next year's meeting schedule **

Meeting location:

SDSTA

630 E. Summit Street, Lead SD 57754

Administration Building/2nd Floor Vault

Please contact Mandy Knight if you have any questions.

Direct Line: 605.722.4022, Cell: 605.641.0475

Recommended Action:

None

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Board Comments – Chairperson Casey Peterson

Recommended Action:

None

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